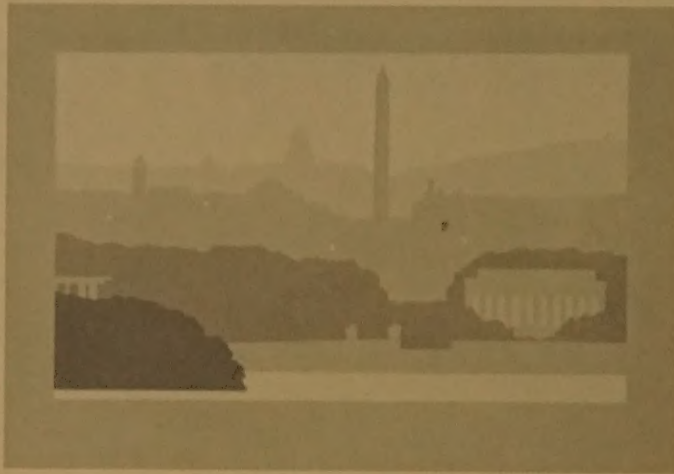


**HOTEL
PLANNING
and
OUTFITTING**

**The ALBERT PICK-BARTH COMPANIES
CHICAGO - NEW YORK**

James M. Goode



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HOTEL PLANNING *and* OUTFITTING

COMMERCIAL
RESIDENTIAL
RECREATIONAL



*Wade Park Manor, Cleveland, Ohio
Geo. B. Post & Sons, Architects*

A Compilation of Authoritative Information on Problems of Hotel
Economics, Architecture, Planning, Food Service Engineering,
Furnishing and General Outfitting, Including Numerous
Illustrations, Plans and Tables of Data

THE ALBERT PICK-BARTH COMPANIES
CHICAGO NEW YORK

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The compilation of this book represents over two years of careful research and analysis by officials of the Albert Pick-Barth Companies together with several consulting specialists who were retained for the purpose. The material was drawn from the large group of hotels whose outfitting was executed wholly or in part by the Pick-Barth organization and which represent a dependable cross section of the industry.

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Hotel Accountants whose extensive experience has involved the analysis not only of hundreds of existing hotels, but preliminary and analytical work for many projects of this nature.

ACKNOWLEDGMENT

It is a pleasure to acknowledge our indebtedness to over one hundred Architects and Hotel Men whose liberal cooperation has been given to us in the preparation of this book. Their assistance has enabled us to present a wealth of material of a character which has never heretofore been published and which we feel is certain to prove a valuable contribution to the industry. We heartily appreciate their cooperation and extend to them our sincere thanks.

THE ALBERT PICK-BARTH COMPANIES
CHICAGO NEW YORK

Modern Hotel Types and Problems

THE hotel business today forms a vast industry which for its materials, equipment, supplies and service reaches out into every channel of manufacturing, commercial and professional activity. It is called upon to provide adequate shelter, food, and a thousand forms of service for a countless traveling public. In addition to its transient phase the hotel industry must also provide permanent housing and minister to the material wants of thousands of families which have given up the struggle against the servant problem to seek immunity in the shelter of apartment hotels where service is perforce of a co-operative nature and the problems of domestic management are centralized.

No form of shelter, in fact no single type of business activity, represents so complicated a series of problems as does the modern hotel industry. It is functioning actively in every town and city, in the suburbs and the rural areas, along every highway, at every resort. Wherever people are, there are hotels. Whatever their material wants, hotels supply them.

This is indeed the most intimate of all industries, closest to the daily life of the country. Where but a few years ago hotels could be numbered in the hundreds, there are now thousands of such institutions. Where there were but two general types there are now at least five.

For the purpose of discussion in this book, hotels have been divided into three general types wherein the problems of design and service vary to a marked degree. These are commercial, residential and recreational, each serving a radically different purpose but all operating along the same economically fundamental lines. Commercial hotels must be considered under two divisions—first, the great urban hotels of which there are relatively but a few and, second, the average one hundred to three hundred room commercial hotel located in smaller cities and towns. It may be noted here that the contents of this book give primary consideration to hotels of average size rather than the complicated individual problems of the great hotels found in our larger cities. The reason is obvious. Information based on average experience is of great value to those conducting or about to engage in the operation of hotels of average size. The owners of very large projects can well afford to retain the consulting service of a powerful group of consulting experts. The problem of the large hotel is highly individual

in character and here average experience is difficult to determine and uncertain of application. For the hotel of average size however data based on contemporary experience is invaluable.

Residential, or as they are often termed, apartment hotels, represent four basic types of service, differing in form but similar in general purpose.

These include (1) apartments of one or more rooms with central restaurant service exclusively (2) apartments with service pantries to provide for food service from a central kitchen (3) apartments equipped with kitchens or kitchenettes for full housekeeping sometimes also having central facilities for the provision of cooked (and sometimes raw) foods (4) apartments and food service for bachelors only (male or female).

The apartment hotel differs from the apartment house primarily in the fact that food service is coupled with the provision of living quarters. It differs from the commercial hotel in that it offers permanent and more comprehensive facilities for family life and does not as a rule maintain full day and night hotel service.

Recreational hotels are primarily resort hotels which must differ in many ways

from all other types because they serve a considerably different purpose. Here must be relaxation, ease, comfort and recreation. Concentration must be avoided, even in plan. The average guest period is longer and so is the average pocketbook but the business is seasonal while maintenance and depreciation costs go on throughout the year.

Recognizing the tremendous complication of problems represented by any hotel project, with a great variation according to the type of service, there are nevertheless certain basic problems common to all. Primarily hotel projects are of an investment character, built and operated to make profits for those who risk their money and time. Unfortunately a vast number of such projects have not been successful in achieving this purpose and when we seek the fundamental reasons for this condition, based always on average experience, it becomes obvious that losses and failures in the hotel industry may be charged primarily to a lack of economic appreciation—failure to analyze the project in a proper businesslike manner before making the investment. Wrong location, wrong plan and false economy—this is the trinity of destruction which has taken countless toll and written countless red figures into the books of the hotel industry. Always there is



Stair Detail—Park Lane Villa, Cleveland, O.
Reynold H. Hinsdale, Architect

a reason for failure and as a rule the fault lies not with the daily management and conduct of the business but goes back to fundamental errors in the original investment. Perhaps the community would not justify a new hotel, a fact which could have been predetermined by correct analysis: perhaps the plan was wrong, suffering from lack of careful study and the application of experienced criticism; perhaps the financing plan was thin and top-heavy, imposing an impossible amortization schedule; perhaps the use of cheap materials and equipment set up an impossible maintenance and depreciation charge!

For over fifty years Albert Pick & Company, L. Barth & Company, Inc., and the John Van Range Company, affiliated companies, have been providing equipment and supplies for hotels. Beginning in a small way this business has grown to vast proportions covering almost every phase of service and equipment required within the bare walls of a hotel building. During this period thousands of hotels of every size and type have been studied. It may be said that there is almost no hotel in the country

where products or service of these companies have not been included in one manner or another.

It seems logical therefore that this tremendous range of experience covering every known problem of the industry should be capitalized and co-ordinated in this book for the benefit of those who may face such problems. To augment the experience of these companies leading authorities have been retained on the editorial staff to round out the discussions of economic and architectural phases and to present a composite viewpoint which should prove of great value to those who have or may be contemplating investments in the hotel field.

This, then, is the background of the comprehensive volume now in your hands. While frankly seeking to cultivate the good will of the hotel fraternity and its constituents everywhere the PICK-BARTH organization sincerely expresses its hope and anticipation that the information set forth in this book will prove of real economic value to the entire hotel industry. To look before leaping, to plan scientifically, to build well, to finance wisely—these are the fundamentals of success. To their encouragement this book is dedicated!



Entrance Detail, Hotel Warwick, Philadelphia, Pa.
Frank E. Hahn and S. Brian Baylinson, Architects

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The Hotel King Cotton

Greensboro, North Carolina

John B. Peterkin, Architect

The Modern Commercial Hotel

The reader has already been warned in the introductory notes beginning on Page 5 that this discussion and the data herewith presented will revolve primarily about the average sized hotel project. This is where average experience is not only available but will count heavily in its application to any specific project of this nature. To the large hotel project we go occasionally for suggestions and for inspiration but for real experience our best mentors are to be found where hotels of comparatively the same size are operating under similar conditions.

The commercial hotel of today, usually a landmark in the town or smaller city where it is located, serves a much broader set of requirements than merely housing a part of the transient local public. As a rule much of the social and business activity of the community centers about and in this building. Very often the hotel itself is a result of community inspiration and support. It is the face which the town presents to the world, an outward expression of industrial and commercial virility. The town with a good hotel is on its toes—where hotel accommodations are poor there is apathy. The one attracts people *and business*, the other discourages all the forces which tend to stimulate sound community development.

On the other hand too many hotels develop a condition perhaps worse than too few. If, through a condition of oversupply, the local hotel industry is on a non-paying basis there will certainly follow a situation which is conducive to neither good service nor good impressions. There will be losses to local investors and a general impairment of credit when a town is placed in the category of communities which cannot support their own local institutions.

We have today in this country an unparalleled condition of active communities where hotels are badly needed while but a few miles away there are towns overbuilt with hotel accommodations. Still we often go on blindly building, blindly investing—primarily because a community wants a new show-place or someone wishes to sell a centrally located building site and because a few blind investors will take the grand project on faith, hope and ultimately charity. Here is economic waste!

So the primary requirement of the new commercial hotel project is to make certain that its existence is justified. That is the reason why the following discussion of modern commercial hotels is opened with the subject of analysis as applied in the preliminary stages of the project. This is closely followed by a study of planning methods because in these two stages the project is made or doomed all in accordance with the dictates of applied common sense.

We have said that the function of the modern commercial hotel is not alone that of caring for transient guests. It must also provide certain community facilities in accordance with local requirements but this function may be also easily overdone. What the community thinks it wants and what it will really use *on a paying basis* are usually

two utterly different pictures as many a hotel man will testify as he sadly pays the maintenance charges on unused ballrooms and private dining rooms (thinking wistfully of the income which the same space might bring if it were originally planned for rooms or other rentable space).

The modern commercial hotel requires that every foot of space shall pay either in direct income or as an important service adjunct.

As common sense struggles to a position of supremacy there are many encouraging aspects to the commercial hotel field. In addition to the trade of commercial travelers there has come a vast army of automobile tourists and a tremendous general increase in travel. True, a large number of new hotels have been erected to meet this increased demand, many of them poorly located and poorly planned, but this first stage of follies and fleeting promotions is passing and the industry is showing signs of stabilization on a much more intelligent and businesslike basis on which foolish investments will be discouraged and hazardous competition to a great extent eliminated by proper community surveys based on serious investigations.

Another important requirement of the modern commercial hotel is that the costly elements of maintenance, depreciation and replacements shall be reduced and subjugated through the use of better quality materials, equipment, furnishings and accessories. Practical experience is dictating a strong trend toward the elimination of cheapness in the original investment and almost without exception the new commercial hotels are better built (particularly in the hidden construction), better equipped and better furnished than ever before. Food service equipment has shown a remarkable change in this respect as will be seen by referring to the section of this book beginning on page 313.

The modern commercial hotel finds its gross income through the sale of space primarily and is content to break even on most of the services maintained for the benefit of guests. Therefore plans must be flexible and allow easily for future adjustments, particularly the ultimate provision of sub-rental space and room additions, the adding of floors or wings as the case may be.

In many instances the most sensible procedure is to plan the entire new project in such a manner that part may be built immediately and the balance of rentable space provided through an addition after the project has demonstrated its earning possibilities.

Another important factor is the architecture of the new hotel as discussed in detail in a following chapter. Good architecture is good business and from this point of view it must appeal to every hotel man regardless of aesthetic considerations. Good architecture has definite advertising value as an institutional asset. It adds materially to the appraised valuation of a building because it promises a longer and more efficient competitive life. It is a powerful aid in the financial and promotional phases of development. As a community asset a well-designed hotel probably ranks foremost

Preliminary Analysis of the Commercial Hotel Project

THE tabulation shown below indicates various important points which should be given consideration before preliminary plans are drawn for any commercial hotel project. A schedule of this kind should be drawn up as *the first step*, adding any points peculiar to the individual project.

Conditions of Site (Physical characteristics only)

1. Suitability of perimeter shape for type of plan most practical from operator's viewpoint.
2. Excavation and Foundation conditions.
3. Conditions and protection for light and air.
4. Requirements for future expansion.

Economics of Site

1. Practicability of location in relation to
 - (a) transportation facilities
 - (b) business centers
 - (c) amusement and shopping centers
 - (d) neighborhood trends
 - (e) type of surrounding buildings.
2. Cost of site as related to the total cost of entire project.
3. Sub-rental possibilities.
4. Trend of realty values.
5. Careful search and insurance of title.

Professional Advice (should be brought in during early stages)

1. Realty expert on land and rental values.
2. Engineer for survey and examination of site to determine excavation conditions, etc.
3. Architect selected on basis of experience and ability (rather than low fee basis).
4. Engineers for complicated structural or mechanical problems.
5. Equipment engineers for kitchen, laundry and special hotel service layouts.
6. Experienced hotel man (preferably future manager) to introduce operating viewpoint.
7. Experienced hotel accountants to set up logical earning power and criticize plans and financing.

Financial Schedule

1. Establish approximate total budget of investment
 - (a) in land and improvements
 - (b) in building and equipment
 - (c) in food service equipment
 - (d) in furniture and decorations.

2. Arrange tentative financing schedule.

Plan Requirements

The following elements should be determined in approximate size and type so that the architect can fit them into the first tentative plans:

Guest Rooms

1. Approximate number required
 - (a) with and without bath
 - (b) sample rooms
 - (c) suites.
2. Corridor sizes.

Public Rooms

- (a) General size and character.
- (b) Approximate relative location.

Food Service

- (a) Approximate size and character of restaurants.
- (b) Requisite size and relative location for kitchens and service space.
- (c) Approximate kitchen equipment.

Sub-Rentals and Concessions

- (a) Probable types and locations in the building.
- (b) Approximate sizes of stores, shops and stands.

Mechanical and Service Equipment

Determine tentatively the requirements of the management as to

- (a) power and heating
- (b) elevators
- (c) laundry, location and size
- (d) ventilation
- (e) storage rooms, linen rooms, etc.
- (f) employes quarters
- (g) repair shops, etc.

Furniture and Decoration

- (a) Approximate allowance for furnishing typical guest room.
- (b) Approximate allowance for furnishing and equipping restaurants.
- (c) Approximate allowance for furnishing and decoration of public space.

Chapter I

Analyzing the Commercial Hotel Project

THE operation of the modern commercial hotel has often been characterized as a specific type of retail business comparable in its fundamentals to the business of any merchant who buys at wholesale and sells at retail. Each day the hotel operator buys his rooms at a wholesale cost comprised of those elements of his so-called "rental cost," which include overhead, maintenance, payroll, and depreciation sinking funds. Each day he sells at retail as much of this merchandise as he possibly can.

There is one vital difference, however, between the sale of hotel rooms and almost every other form of merchandise. There is no salvage of unsold stock. Rooms unsold at the end of the day are forever on the wrong side of the ledger. There is no recourse.

Obviously, then, there is no type of business in which costs and sales methods must receive more scientific study, but in no other type of business are the rewards of careful analysis so great because the hotel industry is the only one in which to any extent *the buyer sets his own wholesale prices!*

This statement means that in the original planning of the project, in the financial set-up, the physical plan and the furnishing and equipment, the hotel operator is creating those elements which are of primary importance in establishing the daily cost per room. The same factors also contribute largely to sales success or failure. In other words, if the fundamentals of the original investment are properly established, the project under reasonably good management will succeed. If the original plans are poorly conceived, no amount of good management can make up for it.

The Important Functional Plan

For these reasons it must be evident that every new hotel project must pass through a carefully considered stage long before the architect's pencil ever touches paper. This first stage is the development of the *functional plan* which should be complete before any effort is made toward drawing up actual plans and specifications. This functional plan should in effect be a dependable business forecast based absolutely on known local controlling conditions. Without this precaution, any hotel project is flirting with failure and warding off success.

The functional plan is actually an analytical report presenting a series of conclusions which prove the investment to be logical and indicate its physical form. Here the economic weaknesses of the project can be disclosed and corrected in advance, and the rental cost predetermined and controlled within proper accounting limitations. Here, too, the factor

of saleability is established and with the proper relating of these two, the logical success of the venture becomes apparent.

The following facts and controlling data should be set forth in the functional plan, and let it be said here that the greater the inexperience of potential hotel investors, the greater is the need for such a precautionary measure.

The first step in establishing the functional plan should be a thorough analysis of the community and all local conditions to determine in general the need for a new hotel and the type and size of project. The second is the selection of site. The third is the financial plan, and finally the elements of the physical plan should be predetermined so that the architect is called upon to *plan a building rather than a business!*

In presenting the information given in this book, it may be noted that the authors have given primary consideration to hotels of average size and of the smaller types which are more definitely in demand than the very large city hotels. Each of the latter presents a series of highly individualized problems, and it is believed that common experience is of more value as applied to hotels of from 50 to 400 rooms, to which the contents of this book are practically limited.

Logical Steps in the Analysis

For the analysis which must precede every commercial hotel project, it is evident that a scientific study of community needs and possibilities is of paramount importance. There is much talk today about overbuilding in the industry. There is definite propaganda under way to correct this condition—and all with good cause. On every hand we see the failures of over-ambitious community projects and the deflation of promotional ventures in the hotel field. We see projects representing millions of dollars in doomed investments. Accountants tell the sad story in figures.



Mantel in the Hotel Greystone
Bedford, Ind.

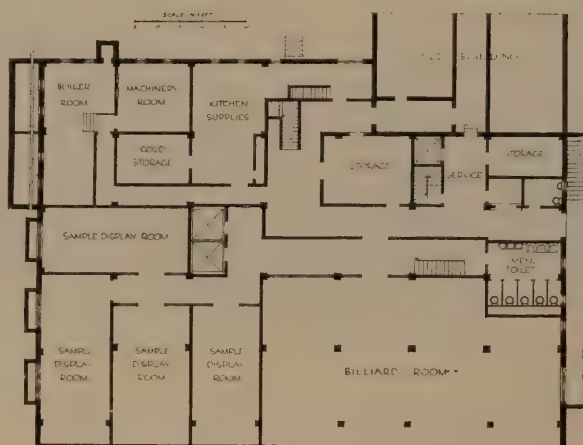
New Southern Hotel

Jackson, Tenn.

R. A. Heavner, Architect

THE New Southern Hotel is an eight story building of reinforced concrete and face brick. It contains 166 rooms, all but 25 of which are with bath. There is a coffee shop and five shops on the main floor, the main dining room being on the mezzanine floor. Besides the usual machinery and storage space in the basement, there is a billiard room and four sample rooms. There are two high speed passenger elevators and one service elevator.

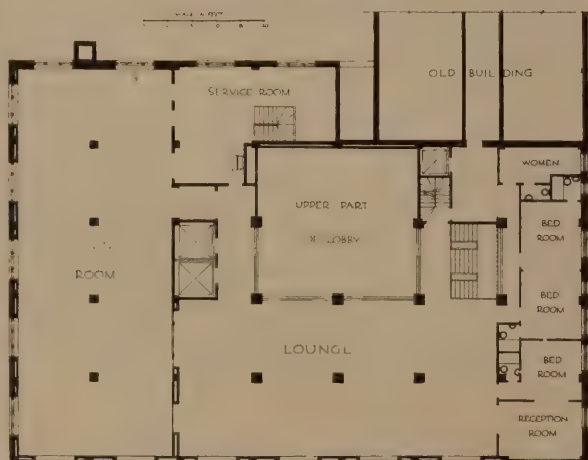
The complete contract for the furnishings and equipment of the New Southern Hotel was executed by the PICK-BARTH Companies.



Basement Floor Plan



Main Floor Plan



Mezzanine Floor Plan



Typical Guest Room Floor Plan

It is our opinion, however, that the hotel industry is not overbuilt—that there are not too many hotel rooms available in this country to meet the vastly growing needs of the public. The real trouble which shows up so plainly on the ledgers is that in many instances these hotels are in the wrong places and of the wrong kinds. The element of common business sense has been lacking too often. If the hotel industry will go about its business of new building as scientifically and sensibly as other industries control their growth, there is and always will be room for many new and successful hotels.

The proposed investor in this field may, therefore, find encouragement in the fact that with sensible preparation and consultation, his project can be thoroughly safeguarded.

The first step of community analysis is not one which should be attempted individually by even the most experienced hotel men. There are good available consulting services which should be employed without hesitation for this purpose. The American Hotel Association offers such service, as do leading hotel accounting firms, financing organizations and publications of the industry. The report thus to be obtained will represent a study of local hotel, commercial and transportation conditions, which will definitely show the need for a hotel and the type of rooms and service for which there is a market. Here will be indicated the conservatively logical room rates, which in turn must set the limit on the investment in building and equipment. In fact, this forecast can and should be reduced to a typical anticipated balance sheet and profit and loss statement upon which figures the proposed investment may be decided.

The information presented in various tables in this book is based on averages taken from actual operations. It is given for the purpose of checking and for preliminary estimates.

Types of Revenue-Producing Space in Commercial Hotels

This check list indicates the various uses of hotel space from an earning viewpoint as based on general experience in hotels of—

AVERAGE 75 ROOM HOTEL

Guest Rooms (with and without bath).
Sample Rooms.
Concessions, lobby stands and 1 or 2 shops.
Restaurant (often omitted in small hotels).
Private Dining Rooms.
Club Rooms (under local arrangements).

AVERAGE 150 ROOM HOTEL

Guest Rooms, Suites and Sample Rooms.
Restaurant and Coffee Shop.
Concessions, News, Cigars, Etc.
Barber Shop.
Stores and Shops.
Banquet and Ballroom
Club Rooms, Private Dining Rooms.

AVERAGE 225 ROOM HOTEL

Guest Rooms, Single and Double.
Sample Rooms and Suites.
Concessions.
Barber shop, Beauty parlor, Turkish bath.
Stores and Shops.
Restaurant, Grill Room, Coffee Shop or Tea Room.
Banquet and Convention Room.
Club Rooms and Private Dining Rooms.
Garage space (separate building).

Average Sources and Values of Commercial Hotel Revenue

These are typical figures based on averages of five hotels in each class. They should be taken only for general estimates and comparisons.

Sources of Revenue	75 Rooms	150 Rooms	225 Rooms
Rooms, average \$3 per day estimated on basis of 70% occupancy	\$57,480	\$114,960	\$172,440
Restaurant, including all forms of food service	52,600	108,000	167,000
Concessions, all types	1,800	3,600	6,000
Service, paid such as barber shop, manicure, valet, laundry, etc.	8,000	20,000	38,000
Sub-rentals, stores, shops, etc.	4,000	15,000	21,000
Total	\$123,880	\$261,560	\$404,440



Main Kitchen, Hotel Sherry-Netherland, New York

Having established the logic of the hotel from the viewpoint of the proposed community, the next step is the selection of a site. Here will arise vital problems which are not to be settled casually nor for that matter determined primarily by the cost of the land.

The question is often asked as to the proper relation of land and building cost. There is no general answer, no standard basis. Of course, for the average building investment, general experience has shown that land should not exceed 20% of the building cost. This cannot be applied to the average hotel problem, because for the hotel business a good location is worth almost any cost, provided this cost can be partially offset by sub-rentals in the form of stores and shops. The representative opinion of several experienced accountants and hotel operators is that the gross rental of stores in a hotel should equal annually 10% of the cost of the land. On this basis, the operation is financially well balanced.

The Average Site

For the average town or city, the site of the commercial hotel should represent a nice balance between the requirements of traveling men and automobile tourists. The location should be in a good developing business district, within easy distance from the principal railroad stations, but not near enough to subject patrons to the nuisances of noise and smoke. The site should also be accessible to the important routes of tourist traffic, today a saving element for many commercial hotel projects. Within reason, a maxim may be established for purchasing a commercial hotel site—"Find the right site and pay the price."

The physical conditions of the site are also important. These include primarily the size and shape of the lot and the conditions of excavation and foundations. Dimensions should be such that the ground floor layout will accommodate the proper number of stores and the necessary layout of public and front office space. A report should be made by competent engineers on the actual construction conditions of the site.

The Financial Plan

At this point, if not before, the financial plan of the project should be given thorough consideration. It is realized, of course, that hotel financing is unlike that of the average realty investment project in that not only the intrinsic value of the land and building are involved, but also the logical condition of the business of the individual hotel—and of the two, the latter is more important. A hotel building, good for no other purpose, has no real estate value except when, as a business machine, it is functioning successfully for its purpose of profitable operation. Therefore, as might be expected, the usual first mortgage channels of the real estate field are not the sources of hotel financing, save in exceptional cases.

In general, it may be said that the financing plan of the commercial hotel project is divided into two stages, which may be termed the senior or first mortgage financing, and the junior or secondary financing which takes on several forms. Naturally, there must be a limit to the cost of financing, and promotional schemes which involve intermediate profits or financing costs of over ten or twelve percent should be avoided. In most instances, the first

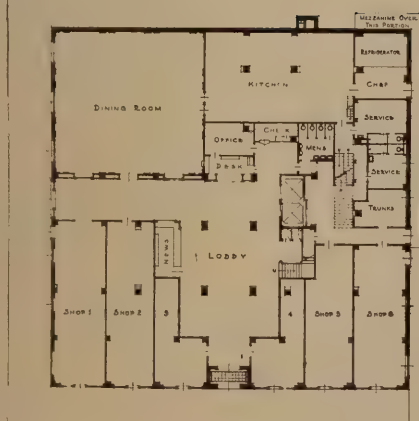


The contract for the Furnishings and Equipment of the Hotel Daniel Ashley was executed by the PICK-BARTH Companies.

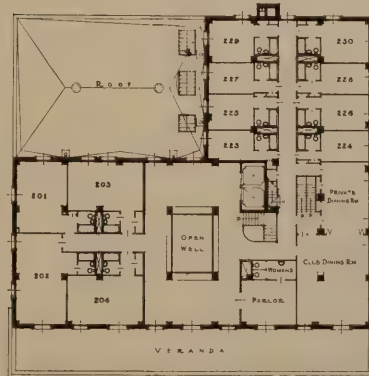
Hotel Daniel Ashley

Valdosta, Georgia

Dougherty & Gardner, Architects



PLAN OF FIRST FLOOR



PLAN OF SECOND FLOOR



PLAN OF TYPICAL FLOOR



Estimated Annual Operating Expenses for a 500 Room Hotel

Not Including Interest, Taxes, Etc.

Payroll	\$118,920
Laundry Expense (Net in operation of own plant)	23,500
House Expense	5,000
Housekeeper's Supplies	4,500
Replacements (Average over first three years)	36,000
Elevator Maintenance (5 elevators)	1,400
Administration (Does not include managers, see payroll)	12,000
Electrical Supplies	3,000
Repairs	10,000
Light, Heat, Power and Water	40,000
Office Expense	1,500
Advertising	18,000
Bad Accounts	4,000
Decorations	1,200
Insurance (Everything except on building)	2,000
Total Expenses (Not including interest, taxes, etc.)	\$281,020

Number and Payroll of Employees

No.	Type	Pay	Total	No.	Type	Pay	Total
1	Manager	\$7,200		1	Supt. Service	1,800	
2	Asst. Mgr. 2,400	4,800		2	Head Bellmen 600	1,200	
1	Treasurer	3,000		15	Bell Boys 240	3,600	
1	Comptroller	3,000		12	Elevator Men 720	8,640	
			\$18,000	3	Lobby Porters 600	1,800	
							\$18,240
1	Bookkeeper	1,800		1	Housekeeper	1,800	
1	Ledger Clerk	1,500		1	Asst. Housekeeper	1,200	
1	Stenographer	1,200		45	Maids 480	21,600	
3	Watchmen 1,200	3,600		6	Inspectresses 600	3,600	
	(Timekeeping, Receiving)			1	Chief Houseman	1,200	
			\$ 8,100	5	Housemen 720	3,600	
3	Room Clerks 3,000	9,000		2	Mending Women 600	1,200	
2	Asst. Clerks 1,500	3,000		6	Scrubwomen 480	2,880	
3	Cashiers 1,200	3,600					\$37,080
2	Write Up Clerks 900	1,800		1	Chief Engineer	3,000	
1	Night Auditor 3,000	3,000		2	Asst. Engineers 1,500	3,000	
			\$20,400	2	Electricians 1,800	3,600	
3	House Officers 1,500	4,500		2	Carpenters 1,500	3,000	
							\$12,600
			\$ 4,500	131			
					Total Pay Roll	\$118,920	

A Recommended Method for Analyzing Hotel Plans

SO great is the importance of this subject even in the tentative stages of a hotel project, that it is desired to call the attention of the reader early to the fact that the usual methods of measuring space allocation on hotel plans is not sound, because it is as a rule based on square footage only.

In the following article on Planning the Commercial Hotel, this subject is amplified, but it is desired to direct the reader's attention to the fact that there are two distinct methods of measuring hotel space according to its economic significance. The first method is to frankly charge all space which does not return direct income to the non-income producing classification. The second method, which is developed herewith, recommends dividing the space for more careful study into five classifications, as follows:

- (a) total floor area used for public space of non-income producing nature
- (b) total floor area used for guest rooms (this will include necessary corridors, elevator space, etc.)
- (c) total floor area used for food service (including kitchens, dining rooms, storage rooms, etc.)
- (d) space used for all other types of service
- (e) rentable space, including stores, concessions (barber shop, beauty parlor, or any other space which brings direct rental or concession income).

The next important point is that practically all hotel plan analyses divide the space only by area, charging to each type of space under either system, the square footage of floor area employed for the particular classification. Obviously, the use of square foot areas alone will not give true percentages when considering the total cost of the building as an original investment of which various parts are chargeable to various types of use and occupancy within the building. The building itself represents a gross *cubic* footage and the original cost of the building is usually estimated on a *cubic* foot basis. Therefore, in addition to sub-dividing the areas by square footage of floor space in a plan analysis, the vol-

ume or cubic contents of the building should be similarly sub-divided to learn just what part of the investment is actually being made in each type of space. For example, a square foot analysis of preliminary plans might show a satisfactory percentage of the floor area allotted to public space of a non-income producing nature. On the other hand, by the cubic foot method of measurement, it might be found that too great a part of the volume of the building (which means the original investment) is being given over to public space of a non-income producing nature. This would probably be because the ceilings were too high and the owner and architect would thus be automatically warned to reduce ceiling heights or to cut down the floor area to obtain a proper balance in the actual original investment in the building. Again, this method of analysis might justify greater floor areas with lower heights or vice versa, giving a more flexible control of plan efficiency.

For readers who may find the second method of plan analysis and the cubic foot measurement ideas of interest, there will be found below a typical set of figures which will indicate in detail how the measurements can be made in a condensed analysis for any hotel plan. Note that the structural parts necessary for each division, such as walls, partitions, etc., are included in the gross measurements of the various areas.

Typical Condensed Plan Analysis

BASEMENT FLOOR

- "C" Kitchen stores (12x24) plus (14x4) equals 344 Sq. Ft.
 "D" Remainder of Basement (77x95)—344 equals 6,971 Sq. Ft.

FIRST FLOOR

- "A" Lobby (52x60) equals 3,120 Sq. Ft.
 Palm Room (23x44) equals 1,012 Sq. Ft.
 Writing Room (12x44) equals 528 Sq. Ft.
 Ladies Dressing Room (10x44) equals 440 Sq. Ft.
 Passage (10x14) equals 140 Sq. Ft.
 Entry No. 1 (11x20) equals 220 Sq. Ft.
 Vestibule (10x16) equals 160 Sq. Ft.
 Alcove (10x14) equals 140 Sq. Ft.
 "B" Elevators (22x9) equals 198 Sq. Ft.
 Service Hall (7x25) equals 175 Sq. Ft.
 "C" Coffee Room (22x40) plus (37x27)—120 equals 1,759 Sq. Ft.
 Kitchen (52x32)—{ (8x21) plus (9x12) } equals 1,388 Sq. Ft.
 Stairs (9x12) equals 108 Sq. Ft.
 "D" Misc. Space equals 540 Sq. Ft.
 "E" Shops, Nos. 1 and 2 (23x47) equals 1,081 Sq. Ft.
 Shop No. 3 (21x27)—60 equals 507 Sq. Ft.
 Telegraph (7x11) equals 77 Sq. Ft.
 Cigar Stand (21x11) equals 231 Sq. Ft.

UPPER STORIES (2, 3, 4, 5, 6)

- "B" 31 Rooms on each of 5 floors equals 155 rooms.
 Area of floor (47x95) plus (99x48) equals 9,217 Sq. Ft.
 Area of 5 floors (5x9,217) equals 46,085 Sq. Ft.
 "D" Pent house (16x20) equals 320 Sq. Ft.
 Machine Room (16x20) equals 320 Sq. Ft.

AREAS

- "A" 5,620 Sq. Ft.
 "B" 46,458 Sq. Ft.
 "C" 3,599 Sq. Ft.
 "D" 8,151 Sq. Ft.
 "E" 1,896 Sq. Ft.

CUBES

- "A" (15.5x5,620) equals 87,110 Cu. Ft.
 "B" (15.5x373) plus (42x9,217) equals 392,895 Cu. Ft.
 "C" (15.5x3,255) plus (8.5x344) equals 53,531 Cu. Ft.
 "D" (15.5x540) plus (8.5x7,611) equals 73,063 Cu. Ft.
 "E" (15.5x1,896) equals 29,388 Cu. Ft.

mortgage will take the form of a bond issue with an amortizing feature which will gradually reduce its size. In this way the first mortgage may safely bear a high ratio to the total cost but amortization should be planned to come out of actual earnings of the business. This mortgage bond issue will probably be handled in local sales by an experienced hotel financing organization, and such handling cannot as a rule be undertaken by amateur financiers. Quite often the first mortgage funds may be supplied by a group of local business men who are interested in having a new local hotel.

It may be generally assumed that about 60% or slightly more of the cost of land and building may be obtained through first mortgage financing. Very often another 20%, representing perhaps the cost of the land, may be handled by paying for the land with a second mortgage to be amortized over a period of from five to ten years. This will leave a probable equity of about twenty percent of the cost of land and building to be supplied by the owner as his actual investment, and on top of this he has also to provide the furnishings.

Experience has shown that the most successful form of business organization for a new hotel project is to establish two companies. The first is the owning corporation which handles the project up to and sometimes including furnishing; and the

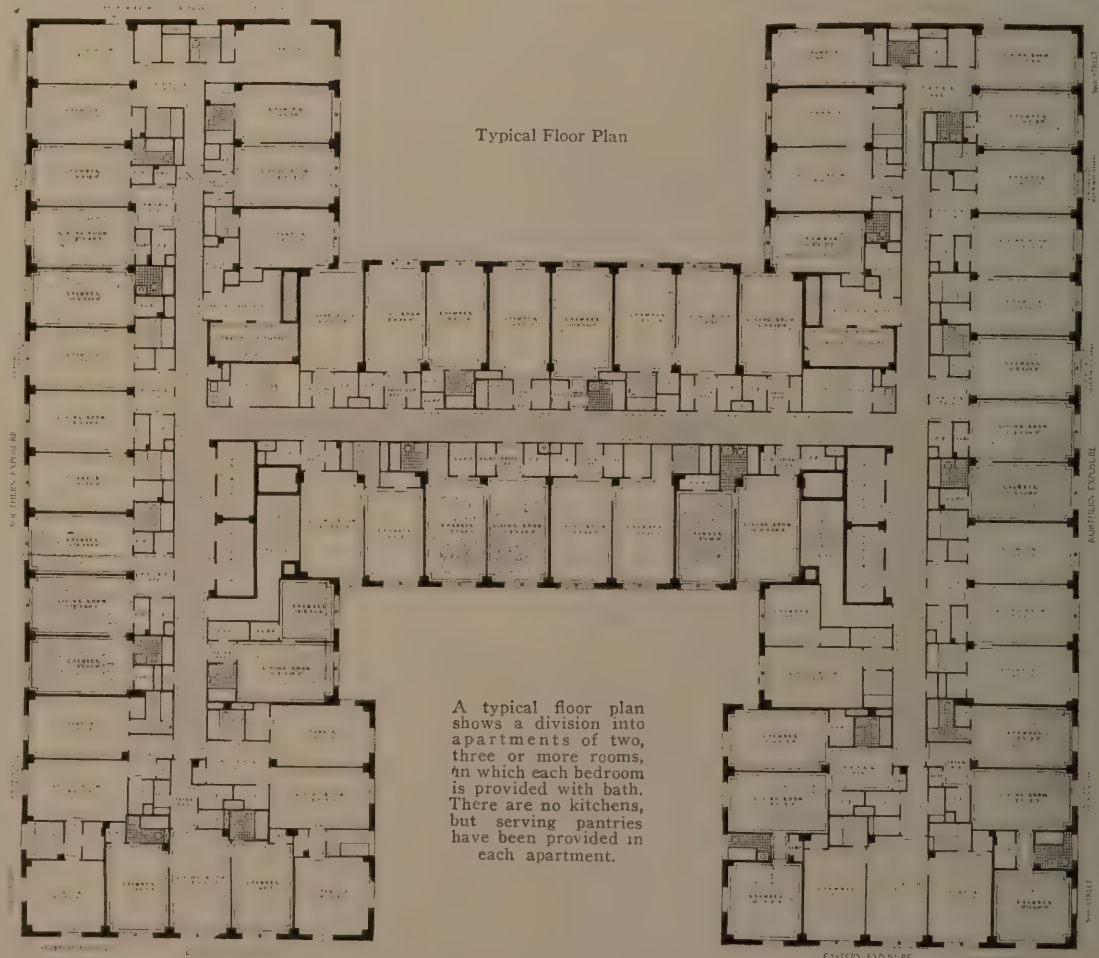
The Park Central

New York

Gronenberg & Leuchtag, Architects

THIS metropolitan hotel is attractively located on Seventh Avenue just south of Central Park. A typical floor plan is shown below. The first floors include a two-story grill executed in Florentine Renaissance style, and the beautiful restaurant is finished in rich ceramic colors. Special features include a roof garden with high vaulted ceiling and vaulted arches through which a splendid view of the city is to be had. A swimming pool and fully equipped gymnasium add considerably to the enjoyment of tenants.

The complete Furnishing and Equipping of the Park Central (a contract amounting to considerably more than a million dollars) was planned and executed by the PICK-BARTH Companies.



Types of Sub-Rental Space in Commercial Hotels

This table provides average plan data based on a study of the plans of a large number of existing hotels. It should be of particular value in developing functional plans of new projects

Type of Occupancy*	APPROXIMATE NET SQUARE FEET REQUIRED		
	In 200 Room Hotel	In 500 Room Hotel	In 1,000 Room Hotel
*Barber Shop	725 Sq. Ft. (7 Chairs)	1,250 Sq. Ft. (16 Chairs)	2,800 Sq. Ft. (23 Chairs)
*Beauty Parlor	450 Sq. Ft. (3 Chairs)	2,500 Sq. Ft. (10 Chairs)	3,500 Sq. Ft. (14 Chairs)
Business Offices	500 Sq. Ft.	1,500 Sq. Ft.	2,000 Sq. Ft.
Drug Store	1,500 Sq. Ft.	2,500 Sq. Ft.	2,500 Sq. Ft.
Florist	(probably none)	625 Sq. Ft.	1,200 Sq. Ft.
Cigar Store	575 Sq. Ft.	575 Sq. Ft.	575 Sq. Ft.
Haberdasher	725 Sq. Ft.	725 Sq. Ft.	725 Sq. Ft.
¹ Shops	3,000 Sq. Ft.	5,000 Sq. Ft.	7,500 Sq. Ft.
[†] News Stand	125 Sq. Ft.	250 Sq. Ft.	250 Sq. Ft.
[‡] Public Lavatory	500 Sq. Ft.	700 Sq. Ft.	1,000 Sq. Ft.
Telephones	100 Sq. Ft.	300 Sq. Ft.	500 Sq. Ft.
Telegraph (1 company only in 200 room hotel)	60 Sq. Ft.	120 Sq. Ft.	120 Sq. Ft.
* Including manicures, lockers and toilets for employees. ¹ These are minimum figures. [†] Combines theatre tickets, newspapers, magazines, candy.			
[‡] Approximate Public Lavatory Equipment	Men 5 W. C. Women 2 W. C.	4 Urinals 6 Basins	11 W. C. 8 Urinals 8 Basins 6 W. C. 5 Basins
			15 W. C. 10 Urinals 12 Basins 8 W. C. 6 Basins

second is the leasing and operation organization. In arranging leases, it is customary to base the lease price as a net percentage on the investment after all interest, taxes, etc., are paid. The usual net rate is five or six percent.

There are, of course, certain flexible elements which may aid materially in working out the financing program. For instance, the entire requirements of equipment and furnishing may be worked out on a contract basis with an organization such as the Pick-Barth companies, providing for payments over a period of time. These payments theoretically and in fact should be made out of operating profits as should the amortization of mortgages, redemption of debenture bonds and other forms of secondary or junior financing.

It may be noted here that the Pick-Barth companies maintain an experienced advisory service which offers unusual features of co-operation with the owners and lessees of new hotel projects. Here, without obligation, it is often possible for a prospective investor in this field to receive invaluable counsel in assuring a sound financing program.

On the page which follows there is presented a typical balance sheet and profit and loss statements prepared by Horwath & Horwath, leading accountants in the hotel field, for the purpose of demonstrating relative equities, costs, sales, etc., involved in a fair average commercial hotel project. The explanations accompanying these figures will serve to bring out many special points and considerations in this relation.

The final, and another highly important element in the preliminary analysis, is the functional plan itself. This is in effect a list of plan and equipment requirements for the architect and other professional advisors who must now work out the project in all its details. A typical analysis of this nature for a commercial hotel is shown on page 26.

Of course, the architect should have been selected early in the preliminary stages of the project and he will help materially in developing the details of this functional plan. Data as to mechanical equipment may be obtained from the architect's own engineers or those selected as consultants. The general requirements of good service space and equipment, furnishings, etc., may be obtained

This is the balance sheet and profit and loss statement of a typical 200 room commercial hotel at the end of its fiscal year at August 31, 1926, after four years of operation.

At August 31, 1966, after four years of operation. The land cost is \$50,000, or one-sixth of the cost of the building. The cost of the land should depend on the store rentals that can be obtained in the location. The store rental should carry the land, that is, the rents should be sufficient to cover 6% on the investment in land plus a proportionate part of the real estate taxes. The profit and loss summary indicates that the store rents amount to \$13,000 per annum, which in this case would be sufficient to pay the carrying charges of the land.

The cost of the building is \$900,000, or \$4,500 per room. The cost of the building should not be greater than to allow at least 6% return on the capital when the hotel is 70% occupied. Depreciation has been written off for four years at the rate of 2½ per annum, which is a reasonable rate for a modern fireproof hotel.

The total cost of furniture and equipment, including all equipment not included in the building contract, is \$180,000, or \$900 per room. This amount should be ample to furnish a 200 room transient hotel. Depreciation has been written off at the rate of 10% per annum for four years.

The amount of first mortgage bonds is \$600,000, or less than 60% of the original cost of land and building. The bond discount and expenses, assuming that the average life of the bonds is ten years and that bond discount and expense were written off on this basis in the first four years, was originally only 5% of the bond issue. This is advantageous financing and is possible only where there is a substantial amount of capital stock paid in.

On the basis of the foregoing, the rent cost per annum for the four years of operation would consist of the following items:

operation would consist of the following items:	
Interest on Mortgage Bonds.....	\$36,000
Amortization of Bond Discount and Expense.....	
Real Estate Taxes.....	20,000
Fire Insurance—Building.....	1,500
Fire Insurance—Equipment.....	500
Depreciation of Building.....	18,000
Depreciation of Furniture and Equipment.....	18,000
	<u>\$97,000</u>

The profit and loss summary is based on an average occupancy of 70% at the average rate of approximately \$3.90.

The direct payroll applicable to the rooms consisting of wages of room clerks, uniformed service and housekeeper's department, is 17½% of the total room income, which is a reasonable allowance in a hotel of this size at 70% occupancy. Other expenses directly applicable to rooms, such as laundry, replacement of linens, cleaning, etc., constitute 7½% of the total room revenue, so that the departmental profit remaining is 75% of the revenue. While many of the larger hotels show better results, this is a reasonable departmental profit in a hotel of this size.

The restaurant sales equal the income from rooms, which should be the case in hotels that pay particular attention to the kind of food and service their guests want and make efforts to satisfy them at a price they are willing to pay.

The cost of food, after crediting the food consumed by employees, is 42½% of the sales, while the payroll is 26% and all other expenses 15%. This leaves a departmental profit of 16½% of the sales. While this result is not as good as may be achieved with very efficient management under favorable conditions, it represents a fair average in hotels of about 200 rooms.

Of the total gross income of \$455,000, the profit remaining for all overhead expenses is \$205,000, or 45% of the gross income. Of this, the unapportioned expenses—not including rent cost—consumed 16½% so that 28½% remains to take care of the rent cost and net profit. The rent cost is 21¼% of the total gross income and the net profit is 7¼% of the total gross income. The rent cost should be judged especially by its relation to the total income from rooms. In order to make a fair comparison, the income from store rents should be deducted from the total rent cost and the balance compared with the room income. In this case the net rent cost, after deducting the rent of stores, is \$84,000, or 42% of the gross income from rooms. At this rent cost, the hotel should produce a reasonable profit under good management. The higher the rent cost goes in proportion to the room income, the more difficult it is to operate the hotel profitably, so that very few hotels can exist with a total rent cost in excess of 50% of the room income.

	SALES	COST OF SALES	PAYROLL	OTHER EXPENSES	PROFIT
ROOMS.....	\$200,000.00		\$ 35,000.00	\$15,000.00	\$150,000.00
RESTAURANT.....	200,000.00	\$85,000.00	52,000.00	30,000.00	33,000.00
TELEPHONE.....	12,000.00	9,500.00	2,000.00	50.00	450.00
GUEST LAUNDRY.....	6,000.00	4,500.00			1,500.00
VALET.....	4,000.00		1,500.00	750.00	1,750.00
BARBER SHOP.....	18,000.00		13,500.00	1,200.00	3,300.00
Total.....	\$440,000.00	\$99,000.00	\$104,000.00	\$47,000.00	\$190,000.00
OTHER INCOME:					
Store Rents.....	\$ 13,000.00				13,000.00
Sundries.....	2,000.00				2,000.00
Total.....	\$455,000.00				\$205,000.00
UNAPPORTIONED EXPENSES:					
General and Administrative.....			\$ 18,000.00	\$20,000.00	
Heat, Light and Power.....			7,000.00	18,000.00	
Repairs and Maintenance.....			4,000.00	8,000.00	
			\$ 29,000.00	\$46,000.00	\$ 75,000.00
	\$455,000.00	\$99,000.00	\$133,000.00	\$93,000.00	
INCOME AVAILABLE FOR RENT					
COST.....					\$130,000.00
RENT COST.....					97,000.00
NET INCOME.....					\$ 33,000.00

ASSETS		LIABILITIES	
CURRENT ASSETS:		Less: Reserve for Depreciation..... 72,000.00	
Cash—In Banks.....	\$ 34,000.00	108,000.00	
On Hand.....	2,000.00	1,086,000.00	
\$ 36,000.00		DEFERRED CHARGES:	
Accounts Receivable.....	\$ 10,000.00	Bond Discount and Expense..... \$ 18,000.00	
Less: Reserve for Bad Accounts.....	500.00	Organization Expense..... 9,000.00	
	9,500.00	27,000.00	
Inventories:		TOTAL ASSETS..... \$1,175,000.00	
Food.....	\$ 2,800.00		
Supplies.....	2,100.00		
	4,900.00		
\$ 50,400.00		LIABILITIES	
PREPAID EXPENSES:		CURRENT LIABILITIES:	
Insurance.....	\$ 3,400.00	Accounts Payable..... \$ 21,000.00	
Taxes.....	6,700.00	Notes Payable..... 8,000.00	
Sundries.....	1,500.00	Accrued Expenses:	
		Payroll..... \$5,400.00	
		Interest on Bonds..... 6,000.00	
		Sundries..... 1,600.00	
		13,000.00	
		\$ 42,000.00	
FIXED ASSETS:		FIXED LIABILITIES:	
Land.....	\$150,000.00	First Mortgage Bonds..... 600,000.00	
Building.....	\$900,000.00	CAPITAL:	
Less Reserve for Depreciation.....	72,000.00	Capital Stock..... \$525,000.00	
	828,000.00	Surplus..... 8,000.00	
		533,000.00	
Furniture and Equipment.....	\$180,000.00	TOTAL LIABILITIES..... \$1,175,000.00	

Analysis by Herwath & Herwath

through the engineers and decorators on the service staff of the Pick-Barth companies.

This functional plan, as shown, will list the approximate size and type of all important space requirements. Thus, before starting the actual plan, the architect has the advantage of a well developed business plan with its specific requirements of functional space of every nature. His problem then becomes one of creating a building to fit a given site and to include in proper inter-relationship all of the space units already set up for him in the functional plan.

This logical method of procedure practically takes all guesswork out of the new hotel investment. Here is a set of economic requirements on which business success is predicated and which have now intelligently to be reduced to physical form. Here the plan is predicated on the projected balance sheet and profit and loss statement where the reverse condition is unfortunately too often the case. In other words, the accountants' figures and the service of trained economists can and should be used to predetermine the plan of the new hotel, rather than to later analyze the reasons for its failure as a business project!

In following chapters will be found discussions of actual planning methods and data which has a considerable bearing on the establishment of the functional plan. This chapter, however, will have served its purpose if it has indicated to readers the great importance of a scientific predetermination of the manner in which a commercial hotel project should be approached to gain reasonable assurance of the success of the venture before the money is irretrievably spent.

ARCHITECTS who desire assistance in matters of planning may secure the unlimited cooperation of the engineers and hotel specialists of the PICK-BARTH Companies, which include Albert Pick & Company, Chicago, L. Barth & Company, Inc., New York, The John Van Range Company, Cincinnati, and The "White" Door Bed Company, Chicago. The counsel of their highly trained staffs of men will prove of particular value in connection with preliminary plans, space allotment, food service engineering, efficiency planning and other early problems where the application of experience and keen appreciation of hotel requirements can provide against costly and harassing complications later on. Owners, promoters, architects and financing organizations also find consultation with the PICK-BARTH Companies highly helpful in making preliminary forecasts, and budgets covering furnishing and equipping. Such forecasts, when made by PICK-BARTH specialists are carefully based upon the actual experience of hotels of similar size and character—the only method which should be employed if figures are to be safely relied upon. No charge is made by the PICK-BARTH Companies for this service.

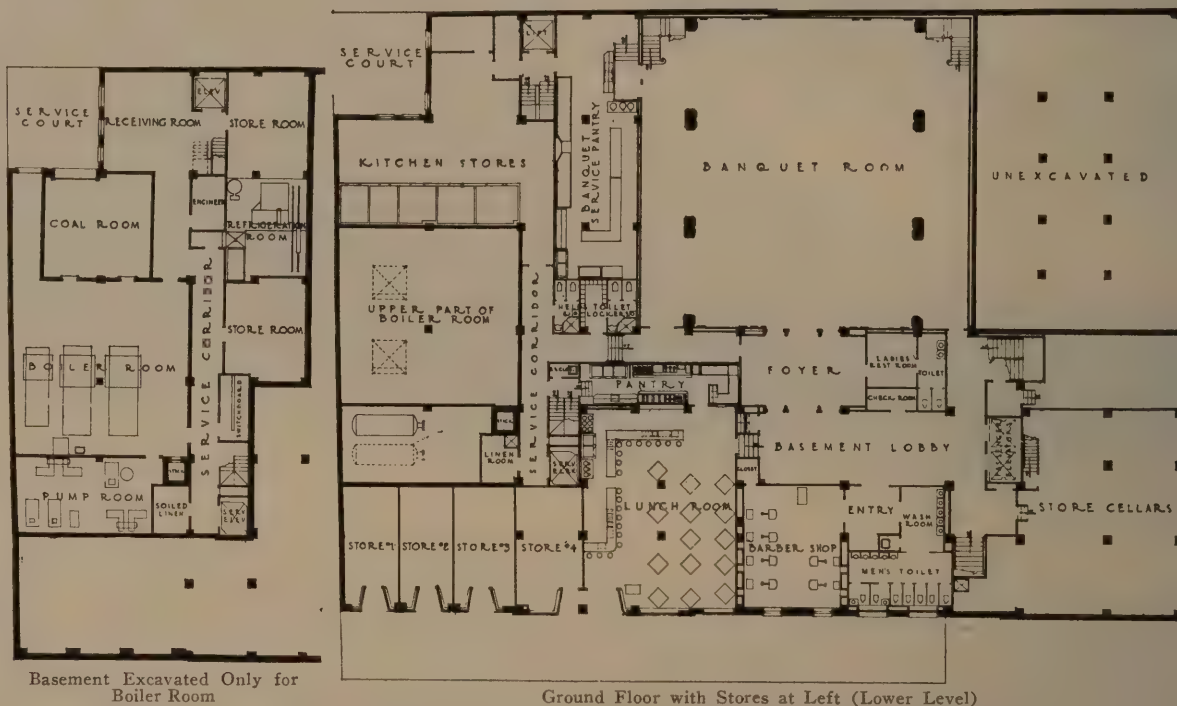


Attractive Entrance to Lobby of Bismarck Hotel, Chicago
Rapp & Rapp, Architects

Floor Plans of the King Cotton Hotel, Greensboro, N. C.

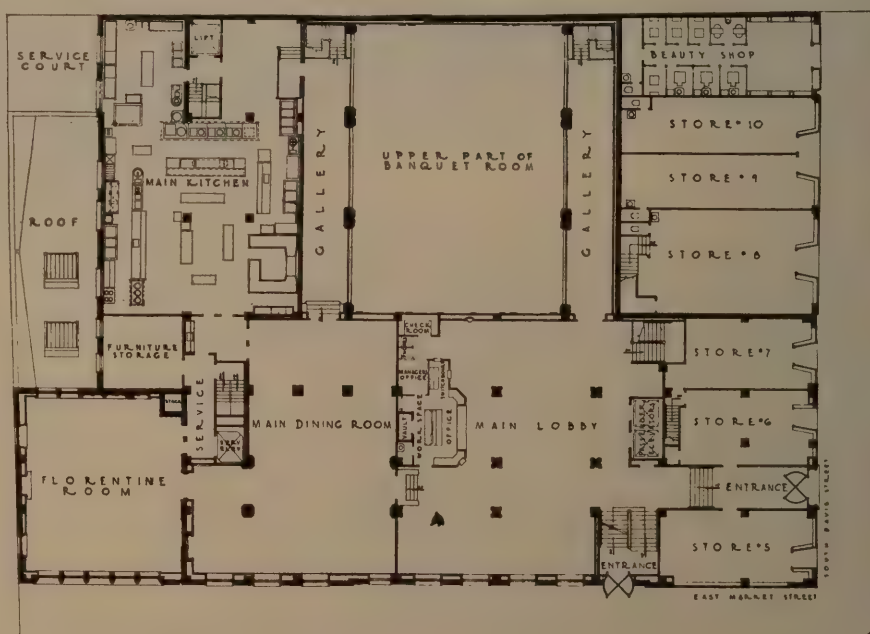
John B. Peterkin, Architect

(See Frontispiece—Also Additional Plans on Page 33)



The complete contract for the Interior Decoration and Furnishing of the King Cotton Hotel was executed by the PICK-BARTH Companies. The Food Service Equipment is that of The John Van Range Company (affiliated with the PICK-BARTH Companies).

Main Lobby Floor with Stores on Higher Street Level



Clever Planning Takes Advantage of Street Grade Condition

NOTE that street (East Market) grades sharply downward from right to left. This condition allowed economical planning of stores on two street levels; the placing of lower part of banquet room in

space usually undesirable; a private street entrance to the banquet room; and the arrangement of much of the service space without expensive excavation. A good example of extremely careful preliminary planning.

Chapter II

Planning and Building the Commercial Hotel

A study of the plans of hundreds of medium sized commercial hotels goes far to convince one that as yet no general standards of hotel planning have been developed—no cut and dried formulae of room sizes and inter-departmental relationships which will guarantee smooth and economical operation. On the other hand, there is available a wealth of operating and accounting experience which would seem to indicate those fundamentals of planning on which the success of the venture can be based. Only from observation of actual experience can average principles be established as a guide in the planning of new hotels, and these at best can be taken only as suggestions for practical, well-studied application.

We may assume at the start that each commercial hotel project is a highly individualized problem because of the variation in requirements, local conditions and the dimensions of sites. It is true, however, that each unit of the plan, in accordance with its required purpose, may be fairly well standardized in its relative disposition and size.

The Schedule of Space Functions

As already indicated in the preceding chapter, the first essential step in planning the hotel is to set up a schedule of space functions. What are to be the required functions should be established originally by a survey of the community and its hotel needs, together with the governing conditions of individual site and its earning possibilities.

On Page 26 will be found a typical functional analysis as established for the planning of a 200 room hotel in a medium sized city. Here it will be seen that the first logical step is to list the types of space which are to be incorporated in the new plan. The second step is to assign to each type of space the approximate square foot size which can economically be allotted to it, bearing always in mind the two types of accounting control which should be ap-

plied as an acid test to each space allotment—first, the earning power of the space, and, second, its possibilities of efficient operation with attendant economies.

When it is realized that much of the success or failure of the modern hotel project is influenced by the plan, it will be understood that the most important phase of such planning is the period of developing the preliminary layouts of the various floors. As explained in the following chapter, the exterior architecture is absolutely secondary to plan and the primary function of the architect is to *plan* the hotel as a business success.

Go Slowly on Sketch Plans

It is the owner's first duty to himself to realize this fact and to cooperate in every possible way toward establishing efficient sketch plans before any thought is given to working drawings, specifications, and the thousand details which are to follow. Far too often the sketch plans are rushed through on the theory that changes can be made at a later date, which is always expensive and seldom satisfactory. After they are prepared, these preliminary plans are deceiving in their apparent simplicity, and it is sometimes difficult to realize that a large proportion of the real thought required by the project must be spent in their preparation.

Detailed Study Here Means Economy

When the first draft of the floor plans is ready, every square foot of floor space and every function should be studied in detail by the management or by experts in hotel operation and accounting. Only when every reasonable improvement has been made should the exterior design and the detailed plans be developed.

As far as the plan layout is concerned, there are six general divisions of what we have termed the functional plan (from which the actual plans and



Banquet Room in the King Cotton Hotel (See Opposite Page)

Functional Plan Analysis (Typical for a Commercial Hotel)

This is an example of a typical functional plan analysis which should be drawn up before any plans are made. The use of such an analysis practically insures not only a great saving in time but a definite increase in the efficiency of the plans.

GUEST ROOMS AND FLOORS

Guest Rooms. Number required approximately 200—190 with baths.
 16 sample rooms located on 2nd and 3rd floors, 220 sq. ft. average size, each equipped with bathroom, closet and door-bed.
 74 Single rooms with bath (24 with showers), each room approximately 120 sq. ft.
 90 double rooms with bath (all tubs), each approximately 150-180 sq. ft.
 20 Rooms arranged in 2-room suites, door beds in each parlor, 300 sq. ft. to a suite.
 Room heights to be 8 ft. 6 in. clear.
Corridors. Minimum width 7 feet.
Linen Rooms. 2 on each floor, 70 sq. ft. each.

PUBLIC AND SEMI-PUBLIC SPACE

To be provided in logical locations on basement, first and mezzanine floors.
Lobby. 40 ft. x 60 ft., main entrance on S. Street, front office 300 sq. ft., checkroom 150 sq. ft., porter's desk, news and cigar stand, telegraph and telephone desks; mezzanine.
Lounge. Allow 1500 sq. ft.
Writing Room. Approximately 12x20 feet.
Public Lavatories, Restrooms, etc. Men, 4 stalls, 5 toilets, 5 wash-basins. Women, 4 toilets, 4 wash-basins, rest room.
Ballroom. For conventions and entertainment, 40x70 ft. stage.
Club Rooms. One 25x60 ft., one 20x40 ft.
Private Offices. On mezzanine, 4 approximately 180 sq. ft. each.
Sub-Rental Space. 2000 sq. ft., 6 or 7 stores, outside and lobby entrances.
Barber Shop. (6 chair) and *Beauty Parlor*, 12x24 ft.

FOOD PREPARATION AND SERVICE

Main Dining Room. To seat about 300, area approximately 4500 sq. ft. (dance floor and orchestra stage extra.)
Kitchen. For above, area approximately 3300 sq. ft., including storerooms.
Lunchroom. Seating about 100, area approximately 2750 sq. ft., including kitchen.
Banquet Service Pantry. For Ballrooms, area approximately 700 sq. ft.
Private Dining Rooms. 3—each about 250 sq. ft.

GENERAL PLAN DATA FOR ARCHITECT

Construction. Reinforced concrete, fireproof building, brick and terra cotta walls on hollow tile.
Heating & Power. Low pressure steam system, isolated plant, live steam for kitchen, ventilation for all public space and for all inside bathrooms, oil to be used for fuel.
Elevators. 3 Passenger.—2 Service.

specifications should be developed). These are as follows:

Public Space, for the most part of non-income producing nature and including the lobby and front office, lounges, writing rooms, public toilets, entertainment facilities such as ballrooms, and similar space given over as an auxiliary service to guests.

Concession Space, which is of income producing nature and represents paid services provided for guests, including barber shop, beauty parlor, cigar and newsstand, valet, laundry, and any other logical service inherently demanded as a part of complete hotel operation.

Sub-Rental Space, as its name implies, includes space provided for stores and shops, club activities, or other forms of leased space used in selling wares to the public and to guests of the hotel.

Food Service Space, which includes restaurants, cafés, and all other places in the hotel where food is served, together with the kitchens and other necessary service quarters for restaurant and room service.

Guest Room Space, including not only the typical floor layout with corridors, elevators and lobbies, but any special rooms like sample rooms or suites.

General Service Space, which includes basement, pipe lofts and other space for mechanical equipment; and the help's quarters, linen rooms, and other space necessary for actual operating functions.

The first step in planning should be the listing under each of these divisions of the actual functions

or purposes for which each space unit will be required in the specific project. The next step should be to assign approximate sizes, number of spaces required, and general plan data on each. In this manner the architect is really provided with a mixed group of space units, which if put together intelligently under the established requirements, should provide a satisfactory and successful plan. Of course, as the plan develops under this system, there will be adjustments, new suggestions, and changes in the functional plan to meet the limitations of the physical plan, but at the same time the first draft of floor plans developed in this manner will quite clearly interpret the business requirements of the project.

This system of establishing the functional plan as a guide will be found far more satisfactory than to start with hazy ideas as to a general plan and then work backward in a maze of alterations. The problem of setting up the detailed requirements of the functional plan is one which gradually unravels itself if each unit is considered in light of past experience and probable operation. Perhaps this fact can be better indicated by considering separately each of the six subdivisions of the functional plan as already set forth.

The first important consideration relative to public space is established by the following question: What proportion of the total net floor space can safely be allowed for public and other non-income producing space?

The best answer to this question is to be found by analyzing the plans of a number of successful commercial hotels of average size. For this purpose there are presented on Pages 34 and 35 tabu-

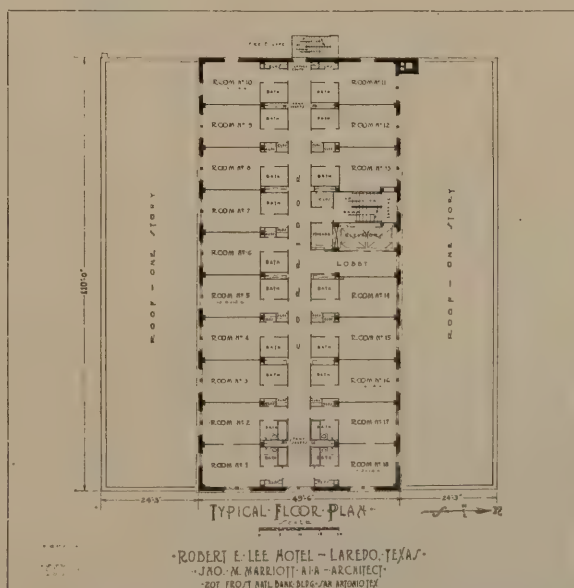
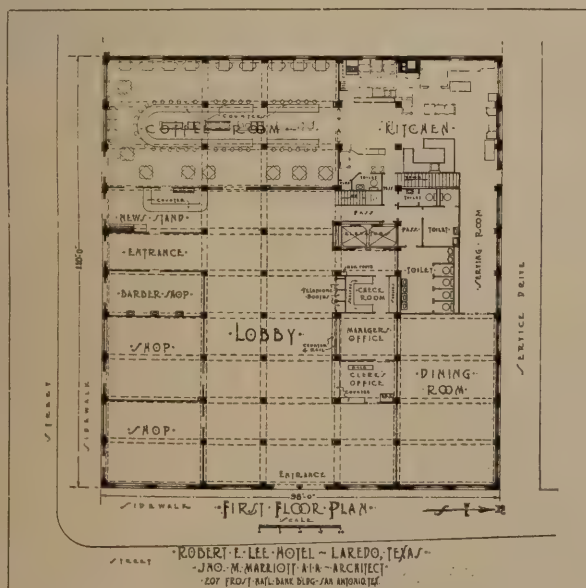


The Robert E. Lee, Laredo, Texas

John M. Marriott, Architect

THE building contains 126 bedrooms, all with private bath, 28 of which are corner rooms arranged en suite. There are four sample rooms. Construction is of reinforced concrete with brick and tile walls. Note the interesting use of the full lot for the first story.

The Furnishings of the Robert E. Lee Hotel were executed by the PICK-BARTH Companies.



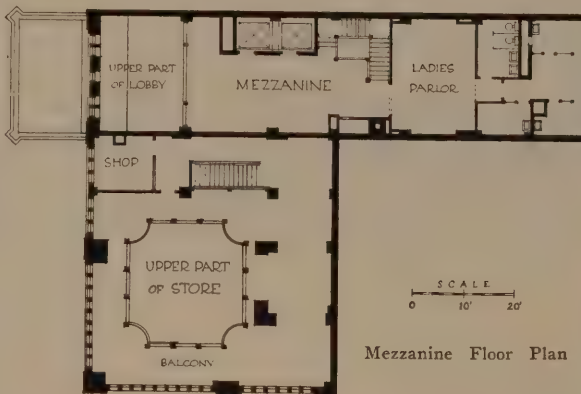
Hotel Randolph

Milwaukee, Wis.

Martin Tullgren & Sons, Architects

A COMMERCIAL hotel of 150 rooms. Land values being high, it is arranged to utilize the ground floor space for income producing space just as far as possible, the kitchens for the restaurant being placed in the basement.

The complete contract for the Furnishings and Equipment of the Hotel Randolph was executed by the PICK-BARTH Companies.



lations showing the average space subdivision in a number of successful hotels. Also the table given on Page 19 represents a careful analysis made for this book by Alexander B. Trowbridge, Consulting Architect, of New York. Here the plans of a typical hotel were subjected to space analysis in the usual manner, by square foot floor areas, and in a very unusual manner—by cubic footage.

We may well pause here to note that the cubic foot method of analysis seems more logical and certainly more interesting as a method of allotting space from a functional viewpoint. Why this is not done more often is somewhat of a mystery. For instance, the average square foot analysis of the plans of a commercial hotel may show a certain floor area given over to public space. The economic demands of the plan may indicate that this space should be decreased by cutting down the size of the

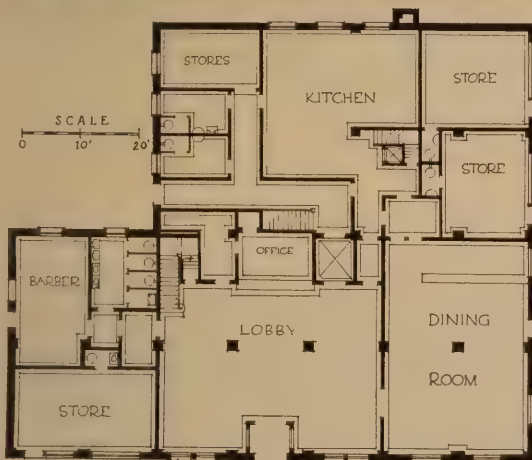
rooms. But what of the height of rooms? Perhaps some of this space is planned for room heights which could be reduced, thus *reducing the cubic footage* and consequently the cost apportioned to that part of the building!

It seems logical to stress the adopting of a standard method of measurement for use in analyzing space subdivisions of hotel plans. Each type of space should be measured both ways—by square feet of floor area and by cubic contents. The total cost of the building varies according to its *volume*, not according to floor area. A variation of one foot in floor height will make a difference of an entire floor in a ten story building. If a 10% reduction in the public space on a preliminary plan is necessary, perhaps it can be gained entirely by cutting down ceiling heights.

The extensive tabulation given on Page 34, repre-

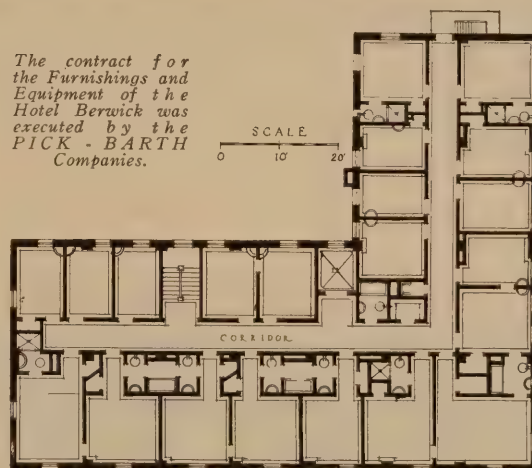
Hotel Berwick, Berwick, Pa.

Dreher & Churchman, Architects



Main Floor Plan

The contract for the Furnishings and Equipment of the Hotel Berwick was executed by the PICK - BARTH Companies.



Typical Floor Plan

sents a space analysis of ten hotels prepared by H. L. Stevens and Company as a guide in working out operating costs on a square foot basis. This table serves well to show the comparative areas in the hotels described.

In larger hotels, the relative area of productive space is larger. For instance, the Roosevelt Hotel, New York, is said to contain 660,000 square feet of which 69% is productive in accordance with the following analysis:

	Total Area	Productive	Non-Productive
Third Sublevel	20,000	6,500	13,500
Second Sublevel	20,000	6,000	14,000
First Sublevel	20,000	6,000	14,000
Ground Floor	42,000	34,000	8,000
First Floor	42,000	24,000	18,000
Mezzanine Floor	30,000	24,000	6,000

Second Floor	37,000	10,000	27,000
Third to 18th Floor....	433,000	333,000	100,000
Nineteenth Floor	14,000		14,000

Total 658,000 443,500 214,500

The data given in the accompanying tables will serve to indicate the experience of other hotels. Naturally, in developing plans for a new project, every effort should be made to raise the percentage of productive space. Public rooms need not depend on large size for impression value or comfort. If the interiors are attractively designed and furnished, a considerable saving in first investment cost may be gained by the use of less space for this purpose. Information on this subject and on the layout and equipment of the front office is presented in later chapters containing detailed discussions.

The Practical Apportioning of Public Space

The purpose of the figures is to indicate the number of square feet in average use for the parts of the hotel plan indicated. These figures are for preliminary planning and checking purposes

	Normal Maximum in Square Feet and % of Total Area		
	75 Rooms (Sq. Ft.)	150 Rooms (Sq. Ft.)	225 Rooms (Sq. Ft.)
Ladies' Parlor.....	150	275	300
Lounges	600	1500	2500
Writing Room.....	None	650	1000
Lobby	1000	2800	4000
Basement Lobby.....	250	400	500
Main Dining Room.....	1500	3000	4250
Coffee Shop.....	700	1150	1350
Small Dining Room.....	None	None	2000
Ballroom	None	4500	4500
Ballroom and Dining Room Foyers	450	750	1000
Total Square Feet.....	4650	15,025	21,400
Percent of Area.....	17%	28%	35%

NOTE: In addition add 8% for kitchens, mechanical plant and service for 75 room hotel and 12% for 150 to 225 room hotels.

Concessions which require space may readily be determined by a careful study of local conditions and the type of guests contemplated. The tabulation on Page 21 indicates the concessions more usually encountered in commercial hotels of various sizes. These concessions, or paid services for guests, are operated in one of three ways: directly by the hotel management; leased on a percentage basis; or leased outright. Their location is a matter of strategic selection, but wherever possible, otherwise waste space in the plan should be utilized.

The planning of concession spaces needs little discussion, although the many floor plans shown in this book will serve to illustrate how many of these problems have been handled.

Importance of Sub-Rental Space

The provision of sub-rental space is of great importance in almost all commercial hotels. As a rule the location of the hotel must be highly developed business sections where the land cost is high—too high if not offset by sub-rentals. To this end very careful study should be given to local store rental conditions to the end that stores and shops may be incorporated in the plan or some structural provision made for their later incorporation when the growth of the immediate business section shall warrant. Because of lack of foresight, many hotels have been forced to undergo expensive alterations to provide sub-rental space as demand has grown. By careful study the spacing and location of structural members on street floor fronts can be arranged to make ultimate alterations simple and inexpensive. The provision of clubrooms, ballrooms, private dining rooms and other space for which the income

must be derived through local, social and fraternal activities is a dangerous problem and one which should be given extremely careful thought. As a rule, unless the demand is clearly evident or long term leases are offered, it is better to omit this type of space. Food service in such space is rarely profitable and many good commercial hotel projects are today staggering under the burden of this type of expensive, non-productive space. Instance after instance can be cited, especially in community financed hotels where optimism rather than realism ruled the provision of such space. We know of one commercial hotel of 150 rooms, only a few years old, where close to \$100,000 is now being spent to remodel an entire floor previously given over to a large ballroom with auxiliary service space. Twenty-nine guest rooms are being added by remodeling to a plan which should have been used for that space originally!

In planning stores and shops, it is well to deliberately list the types of occupancy which lend themselves best to incorporation within the walls of a hotel. Generally, these will have both street and lobby entrances and in any event, each space should be laid out in consideration of the probable type of business for which it will be used. Where this point is disregarded, too much space is often provided, thus cutting down the square foot income and increasing the cost of fittings and decorations which the hotel management is often called upon to bear.

As far as the new plan is concerned, the problem of food service space resolves itself into determining how much space is needed for restaurants, kitchens, etc., and where these spaces shall best be located on the plan to provide the most economical

Hotel Retlaw

Fond du Lac, Wis.

*Martin Tullgren & Sons,
Architects*

THIS hotel is of steel and concrete construction, having face brick exterior trimmed with stone. The planning problem here was simplified by the shape of the perimeter. The entire first floor is used for lobby, dining room, kitchen, etc., except for one large corner store. A two-story lobby is arranged to allow a mezzanine floor, where there is an interesting banquet room with check room and service room, and the balance of the space is given over to guest rooms. A typical floor plan shows an arrangement of two-room suites on corners and bedrooms having private baths or direct access to baths. Sample rooms are well arranged with concealed beds.



The Furnishings and Equipment of the Hotel Retlaw were executed by the PICK-BARTH Companies.



Typical Floor



Mezzanine Floor

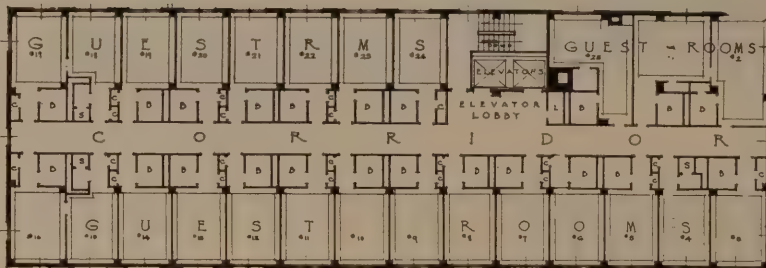


First Floor



Hotel El Jardin, Brownsville, Texas

The Kelwood Company, Architects

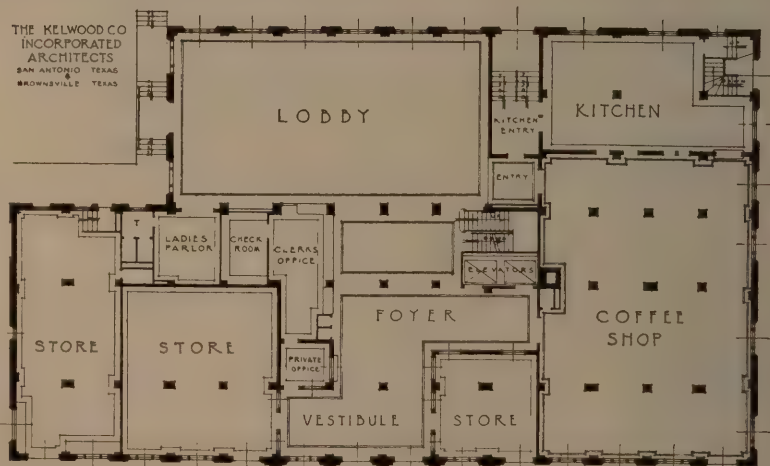


The Furnishings and Equipment for the Hotel El Jardin were executed by the engineers and contract furnishing staff of the PICK-BARTH Companies.

THIS commercial hotel contains 175 rooms with baths, of which seven are sample rooms, and four corner suites are available. The building is constructed with reinforced concrete frame having curtain walls of hollow tile with stucco exterior. The stucco is cream color and the trim is of artificial stone in buff. Inside partitions are 4-inch hollow tile and 2-inch metal lath and plaster shallow partitions for guest room floors.

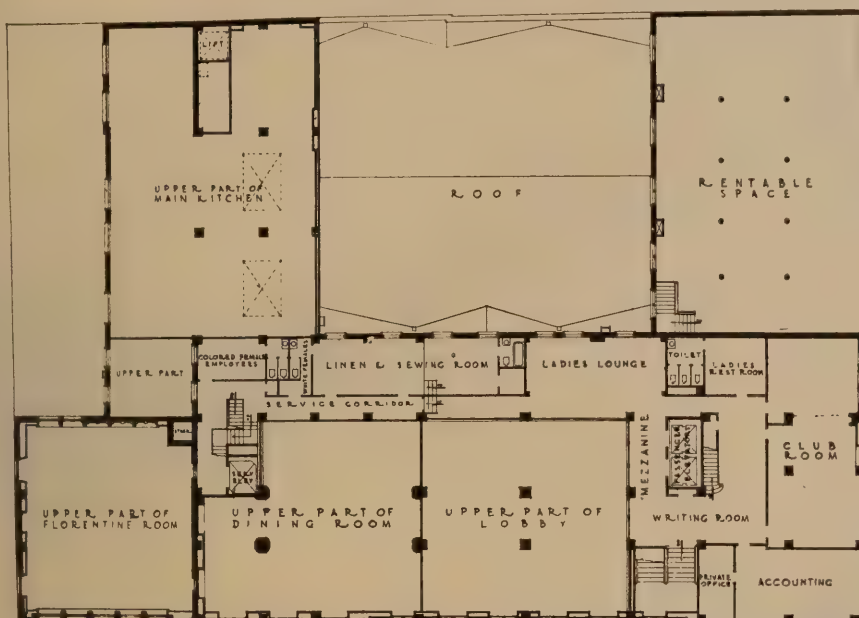
The building was completed in 1926 at an approximate cost of \$2500 a room. The main floor plan as shown is laid out in a practical manner with approximately two-thirds of the space of a direct income-producing nature. The coffee shop is well arranged to serve both the public and hotel guests. The typical floor plans demonstrate the value of the inside bath plan, to use otherwise poor space in a perimeter of long narrow shape. In this manner a bathroom is easily provided for each bedroom.

THE KELWOOD CO.
INCORPORATED
ARCHITECTS
SAN ANTONIO TEXAS
&
BROWNSVILLE TEXAS



Floor Plans of the King Cotton Hotel

(See Page 24 for other plans)



Mezzanine Floor

ADDITIONAL floor plans of the King Cotton Hotel are shown on Page 24. Note by the typical floor plan that the wing shown in light lines is the plan for a future addition. This section of the building is built up to the second floor or mezzanine floor, and it will be seen on the mezzanine plan that the space in that wing is rentable space which can be used for a number of purposes. This idea of planning definitely for future expansion usually represents a considerable saving in ultimate cost.



Fourth Floor Showing Sample Rooms and Future Extension

and efficient type of operation. This subject is one of considerable detail and is fully presented in the later chapters on Food Service Departments beginning on Page 313. There will be found complete data on space requirements of this nature. For this chapter it is sufficient to call attention to the fact that guesswork can and should be eliminated in laying out the space for food service. To the sources of poor planning and equipment may be traced many of the red figures on the books of present-day commercial hotels.

We come next to the all important subject of the guest room space, the layout of the typical floor plan. Here is a subject on which hundreds of pages could be written, but this discussion will be limited to some essential data which it is hoped will prove of definite value in the planning stages of new projects.

Probably the first fact which the prospective investor wishes to determine is the approximate size of the building necessary to provide a given number of guest rooms with necessary service and operating space. This can be determined in advance, even before the architect is chosen, by the following method of approximate figuring. Bear in mind that these are average figures and change according to given conditions.

We may assume that a site has been selected and that the first and

perhaps the second floors, containing public space, restaurants and other special requirement spaces, will be built over 100% of this site. The typical floors, allowing for the shape of the plan, courts, etc., will perhaps cover 70% of the area. The gross square footage of the guest room floor plan is roughly 77% of the area of the site. Assuming, for instance, a site 80'x100', the basement and lower floors will be 8,000 square feet in area, while the typical room floor will be 6,160 square feet. The actual size of guest rooms will be determined in advance—at least their average size. Let us assume that a reasonable size is 10'x14' or 140 square feet. Average experience shows that for bathroom, closet, share of corridor and partitions, it will be necessary to add about 80% to the net size of 140 square

Typical Guest Room Floor



Productive Space in 10 Modern Commercial Hotels

(Based on Data from H. L. Stevens & Company)

Hotels	Total Area		Productive			Non-Productive	Percentage Productive	Hotels	Total Area		Productive			Non-Productive	Percentage Productive
			Rooms	Stores	Restaurants						Rooms	Stores	Restaurants		
Hotel A 365 rooms Population 401,200	Bsmt.	18,000		725	2,700	14,575		Hotel F 109 rooms	Bsmt.	11,125		1,500		9,625	
	1st.	15,490		3,775	2,850	8,865			1st.	10,900		630	5,000	5,270	
	Mezz.	15,490		340		15,150			2nd.	10,900	1,850		315	8,735	
	2nd.	13,700	5,450			8,250		Population 22,082	Typical	24,800	16,150			8,650	
	Typical	95,700	58,400			37,300			Total	57,725	18,000	2,130	5,315	32,280	44.2%
Hotel B 103 rooms Population 12,200	Storage	4,090				4,090		Hotel G 253 rooms	Sub. B.	10,000			4,530	5,470	
	Total	162,470	63,850	4,840	5,550	88,230	46.0%		Bsmt.	10,000		540		9,460	
	Bsmt.	7,750	850			6,900			1st.	6,350		1,060	1,090	4,200	
	1st.	7,500		1,960	2,540	3,000			Mezz.	5,430		930		4,500	
	Typical	7,100	1,700	370	230	4,800		Population 796,800	Typical	60,000	38,500			21,500	
Hotel C 57 rooms Population 7,400	Total	21,100	14,200			6,900			Total	91,780	38,500	2,530	5,620	45,130	51.0%
	Bsmt.	4,310	16,750	2,330	2,770	21,600	50.5%	Hotel H 300 rooms	Bsmt.	21,900		2,620	5,270	14,010	
	1st.	6,090		1,020		3,490			1st.	15,850		4,245	1,960	9,645	
	Typical	14,880	8,775	520	3,100	2,470			Mezz.	15,850	1,150			14,700	
	Total	25,480	8,775	1,540	3,100	12,065	52.6%	Population 152,559	Typical	100,500	69,500			31,000	
Hotel D 165 rooms Population 8,300	Bsmt.	17,225		3,970		13,255			Total	154,100	70,650	6,865	7,230	69,355	55.0%
	1st.	12,400		1,860	4,700	5,840		Hotel I 200 rooms	Bsmt.	16,750		2,800		13,950	
	Mezz.	12,400	750			11,650			1st.	15,050			6,200	8,850	
	Typical	39,000	25,500			13,500			Mezz.	15,050			650	14,400	
	Total	81,025	26,250	5,830	4,700	44,245	45.3%	Population 107,784	2nd.	11,425	4,550			6,875	
Hotel E 197 rooms Population 60,300	Bsmt.	16,000		3,400		12,600			Typical	49,675	33,800			15,875	
	1st.	16,000		1,330	6,300	8,370			Total	107,950	38,350	2,800	6,850	59,950	44.5%
	2nd.	16,000	1,050		450	14,500		Hotel J 250 rooms	Bsmt.	20,000		5,930	3,300	10,770	
	Typical	59,100	39,900			19,200			1st.	16,350	3,650	5,500	4,050	6,800	
	Total	107,100	40,950	4,730	6,750	54,670	48.8%	Population 71,227	2nd.	16,350				12,700	
									Typical	73,500	45,800			27,700	
									Total	126,200	49,450	11,430	7,350	57,970	54.0%

Here is an analysis of space taken from actual hotels which are operating successfully. Note that space classified as productive provides a *direct* income. The non-productive space includes service, public and auxiliary space which *may be necessary*, but it can be reduced a definite saving in original and operating costs may be possible. This information is of particular value because the size of each hotel and the population of each town or city is given, making relative comparisons easier when the plans of projected hotels are being analyzed.

Analysis of Actual Room Sizes in Commercial Hotels

The tabulation given below will serve to give an idea of room sizes taken from 17 modern commercial hotels. This analysis shows the size of rooms with bath, rooms with shower only, rooms with toilet only, and rooms with lavatory only. Measured analysis made by Harry Prince, Consultant.

HOTEL	BATH	SHOWER	TOILET	LAVATORY
King Cotton.....	11'4"x14'7"	9'10"x13'7"	.....	.....
Bothwell.....	9'3"x13'6"	8' 6"x13'6"	8' 6"x12'6"	.....
Oneida.....	9'4"x13'9"	8' 0"x13'3"	8' 9"x12'3"	8'6"x13'0"
Poinsett.....	11'0"x15'6"	11' 0"x11'3"	.....	8'0"x12'4"
Baker.....	11'6"x16'0"	9' 6"x16'0"	.....	.....
Commodore.....	13'0"x18'0"	10' 0"x18'0"	.....	.....
Olympic.....	12'0"x16'0"	9' 6"x12'6"	.....	.....
Pennsylvania Statler.....	11'0"x17'0"	9' 0"x15'0"	.....	.....
Lassen.....	10'6"x13'0"	19' 6"x12'0"	9' 6"x12'6"	.....
Lagonda.....	11'6"x13'0"	.....	.....	8'0"x12'0"
Stevens.....	10'1"x14'7"	9' 7"x13'5"	.....	.....
Chieftain.....	11'6"x13'6"	10' 6"x11'0"	8' 6"x13'6"	8'3"x13'6"
Norfolk.....	11'0"x15'0"	8' 6"x15'0"	9' 0"x14'0"	9'0"x14'0"
Jamestown.....	12'0"x14'2"	8'10"x11'2"	8'10"x11'2"	.....
Buffalo Statler.....	11'0"x17'0"	11' 0"x15'0"	.....	.....
Detroit Statler.....	12'0"x15'0"	9' 0"x11'0"	.....	.....
Roosevelt.....	11'0"x18'0"	9' 0"x15'0"	.....	.....
AVERAGE.....	11'1"x15'3"	9' 6"x13'6"	8'10"x12'10"	8'4"x13'0"

Proportioning of Bath and Lavatory Facilities

(In 12 Commercial Hotels)

The figures given below constitute an analysis of various types of commercial hotels to show how they compare with respect to the bath and toilet facilities that have been provided. Analysis by Harry Prince, Consultant.

HOTEL	LOCATION	POPULATION	TOTAL				
			ROOMS	BATH	TOILET	LAVATORY	PER CENT
King Cotton.....	Greensboro, N. C....	50,000	231	231	.....	.....	100
Richard McAllister.....	Hanover, Pa.....	15,000	72	60	12	.....	84
Bothwell.....	Sedalia, Mo.....	25,000	109	58	16	35	63
Oneida.....	Oneida, N. Y.....	15,000	56	30	4	22	54
George Mason.....	Alexandria, Va.....	20,000	104	76	28	.....	73
Poinsett.....	Greenville, S. C.....	30,000	196	196	.....	.....	100
Baker.....	Dallas, Texas.....	185,000	678	678	.....	.....	100
Olympic.....	Seattle, Wash.....	345,000	617	617	.....	.....	100
Cleveland.....	Cleveland, Ohio.....	950,000	1000	1000	.....	.....	100
Farragut.....	Knoxville, Tenn.....	100,000	200	200	.....	.....	100
Lincoln.....	Scotts Bluff, Neb....	8,000	78	36	42	.....	47
Norfolk.....	Norfolk, Neb.....	15,000	125	75	19	31	60

feet, bringing the guest room unit up to 252 square feet. Then take the square foot area of the typical floor already determined to be 6,160 and divide it by 252. It will thus be found that we can expect to get about 24 guest rooms on each floor above the second. Thus there will probably be required six floors above the second floor for a hotel of 150 to 160 rooms, assuming some guest rooms on the second floor. So we need an 8-story hotel for this number of rooms on the site given.

Perhaps, next, the investor would like a rough estimate of cost. This can best be done by the cubic foot cost method. The cubical contents of a building are determined roughly by multiplying area by height. We have here two areas—the first is the full area of 8,000 feet covered by the basement, the first floor and the second floor. The height of the basement will probably be 11 feet, that of the first floor 15 feet, and that of the second floor 10 feet, a total height of 36 feet built over the entire area. Multiplying 8,000 by 36 to get 288,000 cubic feet as the contents of the basement and first two floors of the building. Now, we have the area of the typical upper floor as 6,160 square feet. This floor is probably 10 feet high and there are 6 floors or a height of 60 feet. Add 3 feet for the roof, thus obtaining a total height of 63 feet for this portion of the building. Multiply 6,160 by 63 to get 388,080 cubic feet for the upper portion of the building. Add 288,000 and 388,080 to get 676,080 cubic feet as the contents of the building. Turn now to the pages where typical construction costs are given and find the nearest building to the type in question. Suppose the cost is given at 65 cents per cubic foot. The rough total cost of construction will be about \$440,000, or about \$2,800 per room. The above is at least a basis for preliminary figures.

An extremely important element in the planning of commercial hotels is indicated in the plans of the King Cotton Hotel, shown on Page 33. This is the matter of providing in a logical manner for future expansion, and here we may pause to comment on a basic planning problem which has great economic significance from the viewpoint of the hotel owner. Recent experience has shown that an extremely wise procedure in a development of a new commercial hotel is to plan the building for its ultimate capacity, but to build only part of it—in fact, to provide a smaller number of rooms in the beginning than the situation might warrant. If the hotel is so planned that complete foundations can be built or allowed for, it is possible to utilize all of the first and second story space of the ultimate building and to carry up one or two wings of guest room floors at a later date, when the first unit has been placed on a paying basis and its financing adequately adjusted. The addition of a new wing is a matter of but a few months' construction and this conservative safeguard is advisable in almost all instances. In fact, it is to be noted that among the successful hotel operators, and indeed on the part of architects experienced in hotel design, the trend toward this method of developing hotel projects is almost general. Today there are in existence many commercial hotels which are almost on a paying basis or perhaps paying a slight profit, but which could be placed on a very sound business basis if they had from 35 to 100 more guest rooms. Unfortunately, most of these buildings were planned with foundations and structural members which will carry only the load of the present structure, nor were the owners sufficiently impressed with the possibility of expansion to purchase additional land for one or more wings. The result is an absolute restric-

(Continued on Page 41)

Apportioning Guest Rooms by Types and Sizes

Here will be found average apportionments of various types of guest units in hotels ranging from 75 to 1000 rooms. This information should be of help in laying out preliminary plans.

Type of Guest Room	75 Rooms	150 Rooms	500 Rooms	1000 Rooms
*Single, with bathtub, toilet, lavatory.....	4	None	75	150
Single, with shower, toilet, lavatory.....	12	17	25	50
Single, with lavatory and toilet.....	8	20	None	None
Single, with lavatory only.....	23	35	None	None
Double, with bathtub, toilet, lavatory.....	20	72	300	700
Double, with shower, toilet, lavatory.....	4	6	100	100
Double, with lavatory and toilet.....	4	None	None	None
Double, with lavatory only.....	None	None	None	None
Two Room Suites.....	4	8	30	50
Sample Rooms.....	4	6	15	25

*NOTE: Use of door beds increases efficiency.



The 32nd and 33rd floors are laid out as complete apartments.



Second Floor Plan

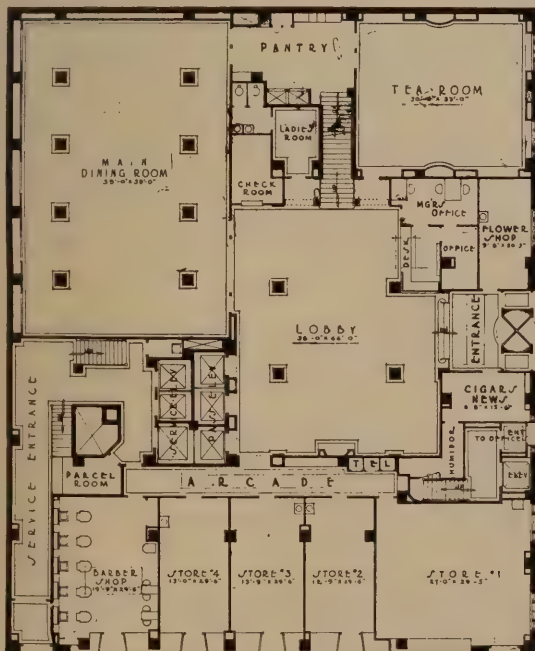


The Warwick, New York

Geo. B. Post & Sons, Architects—Emery Roth, Associate

HERE is another of the fine recent New York metropolitan hotels. This is a splendid example of the effect of the zoning regulations in New York, which require setbacks. If properly treated, these setbacks provide unusual architectural beauty. Plans of the various floors clearly indicate the layout. The typical floor plan indicates apartments of from one to three rooms with full serving pantry equipment.

The Furnishings and Equipment of the Warwick were planned and executed completely by the PICK-BARTH Companies.



First Floor Plan

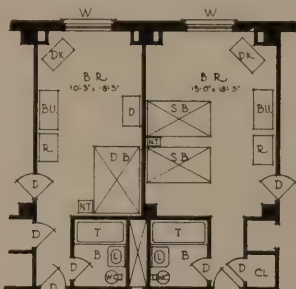


Typical Floor Plan

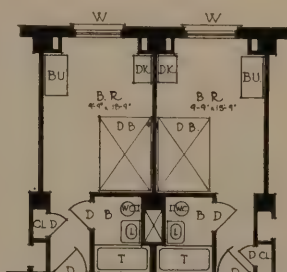
Various Types of Guest-Room Units

THIS page presents a series of 12 room units selected from actual commercial hotels where the operation has proven successful. As a rule, room and bath units must be designed to meet specific conditions, and no one type of unit can be taken as ideal. The purpose of presenting these plans is to offer a number of valuable

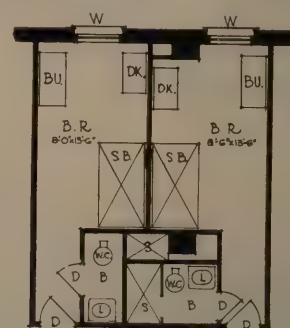
suggestions as to layout and proportions. These plans were drawn by Harry Prince, who is one of the consulting editors of this book, and they include a broad range of dimensions and arrangement. It will be noted that the room sizes are given in each case and particular features are brought out in the captions below each plan.



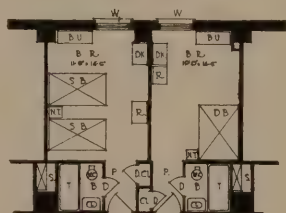
Two double rooms, one with twin beds, two baths, two good closets. Area 612 sq. ft. Outside wall frontage 24'. Depth to corridor 25' 6". Communicating doors permit arrangement en suite. A commodious plan that could be condensed by decreasing depth slightly.



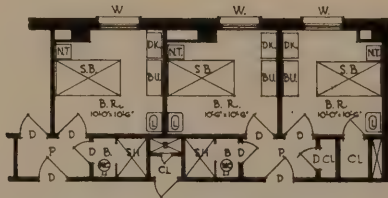
Two double-bed rooms, with two baths, two closets. Area 425 sq. ft. Wall frontage 20'. Depth to corridor 21' 3".



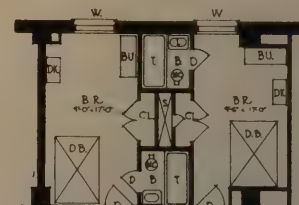
Two single rooms, one shower, one toilet, no closets. Area 351 sq. ft. Wall frontage 17 ft. Depth to corridor 20' 8".



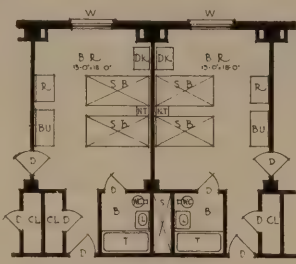
Two double rooms, one with twin-beds, two baths, two closets. Area 462 sq. ft. Outside wall frontage 22'. Depth to corridor 21'.



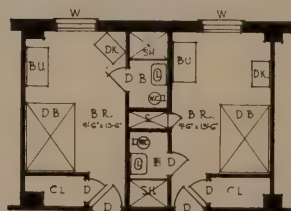
Three single rooms shown above, each with shower compartment and lavatory in guest room. Area for two room units 363 sq. ft. Frontage for two rooms 22' 3". Depth to corridor 16' 4". Note connecting foyers and absence of interior columns.



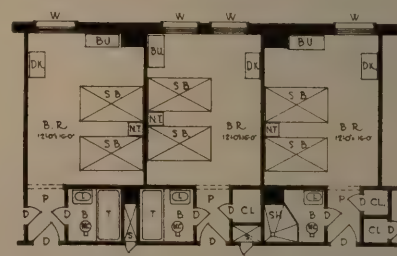
Two double rooms with compact baths and broad shallow closets. Note space lost in right hand unit due to columns. Area 415 sq. ft. Outside wall frontage 24'. Depth to corridor 17' 4".



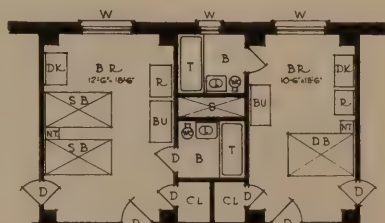
Two twin-bed rooms with baths and closets. Area 688 sq. ft. Wall frontage 27'. Depth 25' 6".



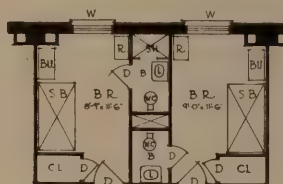
Two double rooms with showers and good closets. Area 405 sq. ft. Outside wall frontage 23' 8". Depth to corridor 17'.



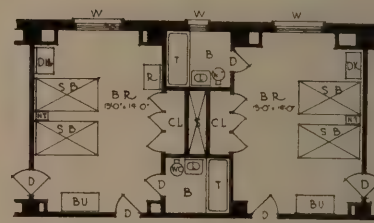
Three twin-bed rooms shown above, each with bath or shower. Area of two rooms 539 sq. ft. Frontage 24' 6". Depth 22'.



Two double rooms, one with twin beds. Two baths, good closets. Note column arrangement. Area 589 sq. ft. Outside wall 31'. Depth to corridor 19'.



Two single rooms; one with shower the other with toilet compartment. Each has a good closet and an appearance of comfortable space in rooms of minimum dimensions. Area 312 sq. ft. Outside wall frontage 22'. Depth to corridor 14' 6". No interior column shown.



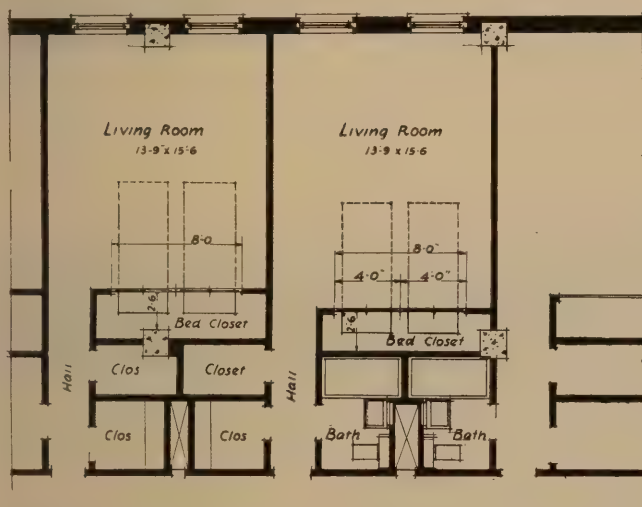
Two twin-bed rooms of commodious size each with bath and very broad shallow closets of wardrobe type. Note extension of column enclosures for architectural balance. Area 673 sq. ft. Outside wall frontage 34' 6". Depth to corridor 19' 6".

Space-Saving Suggestions for Sample Rooms

THE advent of the Door Bed, bringing with it the possibility of establishing double service room space, is particularly significant in its effect on the planning of sample rooms. The sample room plans which are illustrated on this page present possibilities which the architect or the practical hotel man will immediately recognize. Comfortable Door Beds are installed in bed closets to occupy the position shown in the rooms when let down at night and to disappear during the day, leaving the sample room clear for the arrangement and display of merchandise.

From the viewpoint of the commercial traveler, this arrangement is ideal because it not only provides

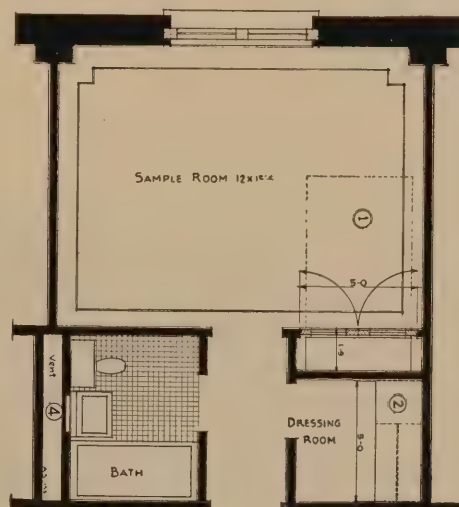
additional space for his purpose, but also makes possible a much more business-like presentation and does away with the necessity of occupying two rooms, showing samples in the bedroom, or being disturbed by necessary maid service. From the viewpoint of planning, it is quite possible in this manner to make sample room units smaller, because the space usually occupied by the bed can be used for display purposes, thus making available every foot of the room. In every instance where Door Beds have been planned for sample rooms, they have been well received by commercial travelers. In fact, those who have extensive sample displays would often go out of their way to obtain this type of room.



SAMPLE ROOMS IN CONGRESS SQUARE, PORTLAND, ME.

This plan shows an arrangement which can well be used for sample rooms or for guest rooms in commercial hotels. The provision here is for twin Door Beds of the type illustrated in Chapter XVII.

This plan provides an attractive living room or sample room with the beds out of way during the day to allow free use of the space. The bed closets are of dimensions which lend themselves readily to the hotel plan. Note here the ample closet space provided for each room.

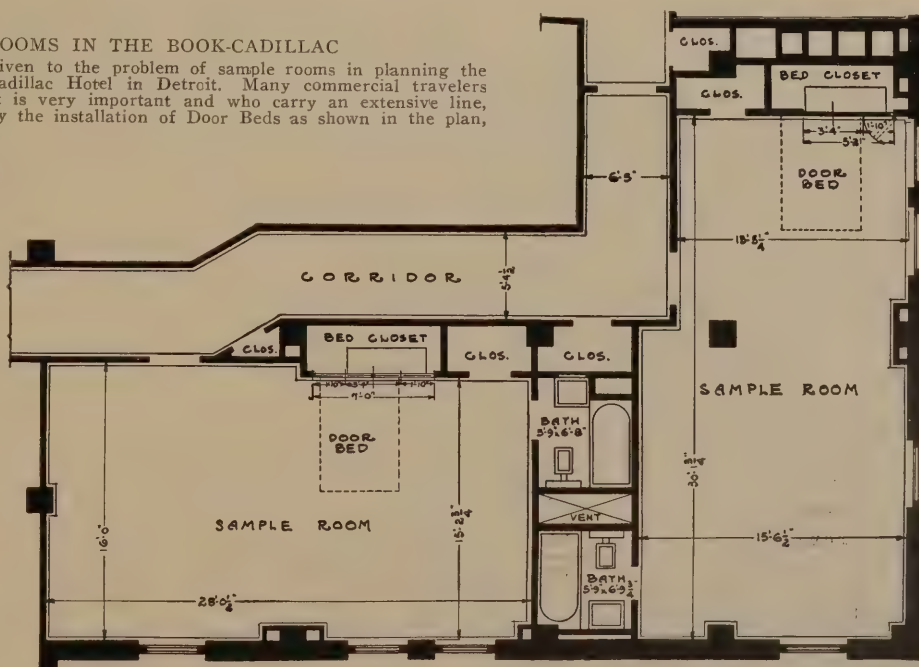


PRACTICAL LAYOUT FOR A SAMPLE ROOM

This suggested layout for a sample room, using a Door Bed of the style shown on page 306, presents a very practical unit for introduction into the average hotel plan. This is a $\frac{1}{8}$ inch scale plan in which the entire unit is 16x20 feet over-all, and includes an ample dressing room with a Dressing Cabinet.

SAMPLE ROOMS IN THE BOOK-CADILLAC

Very careful study was given to the problem of sample rooms in planning the recently constructed Book-Cadillac Hotel in Detroit. Many commercial travelers to whom the Detroit market is very important and who carry an extensive line, need large sample rooms. By the installation of Door Beds as shown in the plan, it is possible in the daytime for the salesman to have an uninterrupted display space of ample proportion, and with the bed eliminated, the attractiveness of the setting is greatly enhanced.



For further details concerning Door Beds and Space Saving Conveniences see pages 304 to 311.

Ten Examples of Commercial Hotel Building Costs

These cost figures are taken from actual projects as described. They include material, equipment, construction and all fees, insurance, etc., except the cost of financing.

	Location and Date of Building	No. Rooms	Construction	Dimensions	Cubic Feet	Cost per Cubic Ft.	Cost per Room
1	Michigan, 1926	60 (with baths)	Brick and steel wood floors semi-fireproof	75x100 4 story and basement	339,200	52c	\$2,940
2	New York State 1926	103 (with baths)	Skeleton steel brick walls concrete floors	51x190 4 story and basement	663,280	67c	\$3,592
3	Texas, 1926	126 (with baths)	Reinforced concrete brick and tile walls concrete floors	1st story 98x110 2nd to 8th sty. 50x110 8 story and basement	620,000	40c	\$1,950
4	W. Virginia, 1925	155 (with baths)	Brick and steel concrete floors hollow tile partitions	50x188 8 story and basement	1,081,000	52c	\$3,400
5	Virginia, 1926	200 (144 with baths)	Steel and concrete brick and tile walls concrete floors	90x135 10 story and basement	1,025,000	58c	\$3,000
6	Texas, 1926	175 (with baths)	Reinforced concrete tile walls stuccoed concrete floors	50x180 8 story and basement	781,200	56c	\$2,500
7	Ohio, 1925	289	Reinforced concrete brick walls concrete floors	87x136 13 story and basement	1,718,000	54c	\$3,200
8	Ohio, 1927	297 (with baths)	Steel and concrete concrete floors (thin slab)	100x119 10 story and basement	1,064,000	63c	\$2,260
9	Pennsylvania, 1925	180 (with baths)	Reinforced concrete brick walls concrete floors	97x150 10 story and basement	1,280,000	65c	\$3,800
10	New Jersey	200 (with baths)	Steel frame brick walls concrete floors	60x200 8 story and basement	1,214,000	57c	\$3,513

Twenty Examples of Furnishing and Food Service Equipment Cost

	Location of Hotel	No. of Rooms	Cost of Furnishings	Cost Per Room	Cost of Food Service	Total
1	Illinois	277	\$137,365	\$495.90	\$53,524	\$190,889
2	Texas	259	89,857	346.93	15,774	105,631
3	Washington	240	103,522	431.34	.....	103,522
4	Texas	221	109,943	497.48	14,373	124,316
5	Missouri	221	100,169	453.25	27,763	127,932
6	North Carolina	219	115,827	528.89	35,871	151,698
7	Wisconsin	200	83,228	416.14	45,993	129,221
8	Illinois	194	101,560	523.50	33,733	135,293
9	Tennessee	166	104,563	629.89	.....	104,563
10	Wisconsin	135	60,126	445.37	14,034	74,160
11	Georgia	127	45,219	356.05	12,431	57,650
12	Illinois	125	45,722	365.76	4,761	50,483
13	Texas	120	48,693	405.77	3,723	52,416
14	Wisconsin	112	51,460	459.46	15,134	66,594
15	Missouri	105	36,251	345.25	4,021	40,272
16	Georgia	102	37,120	363.91	2,634	39,754
17	Texas	94	39,222	417.24	6,376	45,598
18	New Jersey	86	40,700	473.25	25,262	65,962
19	Texas	80	33,592	419.89	8,910	42,502
20	Texas	78	32,624	418.25	10,048	42,672

Typical Construction Cost Distribution For a Modern Fireproof Commercial Hotel

200 Rooms Total Cost \$715,000 Cu. Ft. Cost 58c Per Room \$3,575

Description

Steel and concrete frame, concrete floor arches, cement floors, steel trim wood doors, electric elevators, mechanical ventilation, tile bath rooms, all rooms with bath, good labor and transportation conditions.

Itemized Cost Distribution

Items	Cost	Per Cent	Cost Per Cu. Ft.
Elevators & Cabs	\$ 28,000	.0391	.0226
Heating & Ventilating	37,000	.0518	.03
Carpentry & Millwork.....	65,000	.091	.0526
Excavation	8,000	.0112	.0064
Frame	142,000	.198	.1151
Masonry	92,000	.128	.075
Orna'l & Misc. Iron.....	16,000	.0224	.0128
Painting (No Decorating).....	6,000	.0085	.005
Plastering	45,000	.063	.0365
Plumbing	75,000	.105	.0609
Roofing & Sheet Metal.....	5,000	.007	.004
Wiring & Fixtures	31,000	.0433	.0251
Metal Sash & Trim.....	14,500	.0202	.0117
Glazing	4,500	.0062	.0035
Marble, Tile & Terra Cotta	21,000	.0293	.017
Allowances	40,000	.056	.0324
Profit & Overhead.....	45,000	.063	.0365
Insurance	28,000	.0391	.0226
Bond	12,000	.0167	.0096
Totals	\$715,000	100%	58c

(Continued from Page 36)

tion of an investment, which by a relatively small additional expenditure, could be placed entirely on a good paying basis.

Another phase in planning which has much to do with ultimate cost saving or with the protection of the investment is found in relation to the question of rentable space. Very often a new hotel in smaller cities and towns may be in a location which at the time of building does not justify the provision of stores and shops for sub-rental, because the demand has not yet developed in the neighborhood. It is to be noted, however, that the new hotel very often stimulates commercial development in the neighborhood and it is quite a usual experience to see a new

high-class retail district grow in the neighborhood of the new building. This means that within five or ten years there may be a ready market for good store or shop space at a price which would certainly pay the hotel management if they had such space to lease. It is quite apparent, then, that wise procedure in planning will so arrange the public space and the structural members of the building at relative small expense or with little disturbance, a remodeling program can be carried out to introduce several stores on the ground floor. This is a method of providing additional income at a time when taxes have become higher. It not only helps to carry the building for at least its lower portions, but in many cases will add handsomely to the net profit.

Hotel Ritz-Carlton

Boston, Mass.

Strickland, Blodget & Law, Architects



The Food Service Equipment and a Majority of the Furnishings of the Hotel Ritz-Carlton were supplied by the PICK-BARTH Companies



Main Floor Plan



Typical Floor Plan

Chapter III

Exterior Architecture of the Commercial Hotel

In the preceding chapter on planning the fact has been made plain that a new commercial hotel differs as an architectural problem from many other types of buildings because it must be designed from the inside out. Only after the floor plans have been definitely developed should any serious effort be made to design the exterior.

This fact in no way is meant to belittle the value of good exterior design because there can be no doubt that a pleasing impression at first sight is an indication of good service. Whether the impression be conscious or sub-conscious the average guest is very likely to establish his advance impression of the hotel on his first sight of the exterior.

Experience has indicated another value of good exterior architecture for the modern commercial hotel. Sub-rental leases may be made more rapidly and at higher rentals in buildings of good appearance. Financing is often made easier by the same factor because a higher real estate value invariably attaches to a building of attractive appearance as opposed to one of mediocre design.

While it is apparent and logical that the hotel man's interest in his exterior will be primarily influenced by economic rather than artistic considerations it is also obvious that there are sound business reasons as well as no small measure of pride involved in the desire to have a building of good exterior design.

There will be found illustrated in this book a large number of modern commercial hotels many of which

have excellent exteriors and all of which are at least fairly good. Naturally these are adaptations of architectural styles or combinations of details and motifs from several styles. After all, the hotel exterior is but a cloak design to cover the predetermined types of space established by the plans. Therefore it can be expected only to express the purpose of that space with a sensible degree of attractiveness, limited as the designer is by arbitrary exterior openings and the ever-present necessity for economy.

The exterior architectural treatment of hotels ranging from seventy-five to around two hundred rooms often becomes a difficult problem from the designer's point of view because of the conflict between the desires of the owner and the real requirements of the problem. The major difficulty arises from the fact that most of the smaller hotels are located in relatively small cities and towns where each may well be one of the important and imposing buildings. It is often the desire of the owner to have his new hotel designed in the style of one of the famous large commercial hotels to be found in New York, Chicago, and other major centers, or to introduce unique features which have no proper place in the design.

It is worth while to note the difference between small and large commercial hotels from an architectural point of view. Large hotels are generally located in the congested areas in large cities. Their mass is lost among other buildings or at least they



Grand Stair in the Bismarck Hotel, Chicago
Rapp & Rapp, Architects



Entrance Detail of Hotel Ansley, Atlanta, Ga.
Brinton B. Davis, Architect

do not stand out as any more important than nearby office buildings and other structures of nearly equal size. The very size of a commercial hotel of six hundred to twelve hundred rooms and the necessity for keeping costs within reasonable bounds limits the architectural details to special treatment of the base courses around the first two or possibly three floors and to the cornices. There may be a few decorative elements added to the facade in the form of balconies, special window treatments or other features in the space between the base and the cornice, but these are of negligible importance. The base is the part of the building which is most seen. People seldom take occasion to look up at a tall building when they pass it along the street, but they do appreciate and note the architectural treatment that is within easy vision. In the base the store fronts and the entrances are the main features. The store frontage is so valuable very often that it is difficult for the architect to give due importance to the hotel entrance. The height of such buildings of course is due to the land cost. Set-backs are a new architectural feature characteristic of modern hotels in cities which have a zoning ordinance similar to that in effect in New York.

The small hotel is more often seen as a mass because it is less often in competition with structures of equal size or larger size close by. Very few moderate size cities are so densely built up that the individual large buildings do not stand out independent of each other. For this reason the design of the facade and often of the sides of the hotel is fully as important as the design treatment of the base. The necessity for extreme heights is not so great as in large cities, partly because a hotel of two hundred rooms or less cannot be administered so efficiently

if it is divided up into a great many floors, and partly because land values, while high, are not so prohibitive as in large cities. This lack of height does not give the architect sufficient facade space to utilize the same architectural treatment as on city hotels, for there are too few stories intervening between the base and the cornice and there are seldom any set-backs; consequently the design must be one which is pleasing as a whole.

Architectural styles suitable for small hotels are as varied as for any other type of important building. In spite of what has just been said it is possible to adopt the simple and dignified treatment which has been developed in modern city hotels for these smaller buildings whenever the structure is located in a similar relation to other large buildings. The two hundred room hotel situated on the main business street of a moderate size city, particularly if it be on an interior lot between office buildings, department stores or other structures of some magnitude, may very properly be treated with a simple facade having its principal features confined to the base and possibly to the windows of the public rooms on the second floor above the stores. This sort of treatment, however, may be very awkward and unimpressive if forced when not needed.

A more successful architectural treatment than the imitation of large city hotels is to adopt a style appropriate to the locality. Some historical precedent closely associated with the history of the city may indicate the most desirable treatment. Colonial or Georgian motifs as developed either in the northern or southern states are often particularly successful along the eastern seaboard. The Pennsylvania Dutch type of architecture is very charming and can be used to good effect particularly in the



Detail, Forty-fourth St. Hotel, New York
Rouse & Goldstone, Architects

Typical
Floor Plan

Hotel Washington, Shreveport, La.

Mann & Stern, Architects

THIS is a commercial hotel having 271 bedroom units all with bath, except 17 living rooms to form suites and 10 bedrooms having lavatories only. 75 per cent of the bathrooms have tubs and 25 per cent have showers. Building completed in 1925 at a cost of approximately \$3500 a room.

The complete contract for the Interior Decoration, Furnishings and Equipment of the Hotel Washington was executed by the PICK-BARTH Companies.



First Floor

Second Floor



Mayo Hotel, Tulsa, Okla.



Poinsett Hotel, Greenville, S. C.



Auditorium Hotel, Houston, Texas



Washington Duke Hotel, Durham, N. C.

ARCHITECTURAL TREATMENTS OF UPPER STORIES AND CORNICES



TREATMENT OF STORE FRONTS IN HOTEL ROWE, GRAND RAPIDS, MICH.
B. K. Gibson & Co., Architects



TREATMENT OF STORE FRONTS IN WARM FRIEND TAVERN, HOLLAND, MICH.
Raymond C. Snow & Co., Architects



Attractive Door and Window Details, Hotel Warwick, Philadelphia, Pa.
Hahn & Baylinson, Architects

Central Atlantic States. Other styles may be derived from French, English, Spanish, Pueblo and Mission architecture and are most successful if used in appropriate localities. For the very small hotels ranging from fifty to one hundred twenty-five rooms modifications of the country inn style or treatment similar to that found in the larger mansion houses of the region would be far preferable to an imitation of a city type building.

Looking upon the architectural treatment of the moderate size hotel from its economic aspects brings in other considerations. It will be granted that the attractive appearance of any hotel whether commercial or residential adds in developing prestige and draws trade. Small commercial hotels throughout the country today are enjoying great prosperity from the rapidly increasing motor tourist traffic. Many of these people want the quality and style of city hotels wherever they go. Even the camper-tourist type when they do stop at hotels will prefer the well-designed and modern appearing building to any others if the prices are not out of line. Purely commercial traffic is not repelled by an artistic exterior if the room rates are kept in the line with the usual commercial hotel tariffs.

Economy of construction, however, calls for simplicity, and the architect cannot attempt a country club in his endeavor to produce an individualistic architectural treatment for the hotel. Mass, proportion, color and texture are, however, more important than ornamentation in good architecture and these really cost nothing beyond the services of a skilled designer. The rectangular plan and a simple shape for the building are least expensive. This limits the designer, and compels the omission of towers, turrets, rambling wings and ell, and other excrescences which at best can be seldom justified when one considers them from the hotel manager's point of view. Economy of cubic contents generally calls for a flat roof.

In hotels of this type the principal entrance becomes the main feature in the architectural treat-

ment of the lower part of the building. Store fronts, while invariably desirable when adequate rentals can be obtained, seldom are so important as to crowd out a pleasing treatment of the main doorways. The stores very often are best developed as small shops to be rented to druggists, confectioners, florists, haberdashers, modistes and hair dressing parlors, and can be treated in a more intimate style than would be desirable for large city hotels. The shops of course should be designed as a definite part of the building and much architectural value is gained if the signs over the shops can also be controlled as to type and size. The next most important feature in the facade design is the treatment of the windows. Most hotel plans call for lobbies, dining rooms or other public space utilizing the street fronts of the building, sometimes at the ground floor, but more often where stores are present on the second floor of the building. These rooms being larger than guest rooms call for windows of some size and prominence and these windows can be given architectural ornamentation and made an important feature in the exterior design. The guest room windows, however, for the sake of economy must be kept uniform in size and little can be done with them other than to see that their proportions are satisfactory. Cornices and balconies vary in their treatment with the different styles of architecture and need little comment beyond the statement that they should be subordinated.

Economy cannot be too frequently emphasized as being the predominant problem in hotel design, but economy in first cost must not be obtained at the expense of operating profits. This means that short-sighted economy which results in a bare and uninteresting facade or the economy in first cost which comes from the use of cheap materials cannot be tolerated because the one drives away desirable trade and the other adds to the annual maintenance costs. Both of them reduce profits. A happy medium must be struck to get a building of excellent appearance and of sound construction without extravagance in either design or materials. Brick



Hotel Hanford, Mason City, Iowa
Proudfoot, Bird & Rawson, Architects



Hotel Grim, Texarkana, Ark.
Mann & Stern, Architects



Window and Cornice Treatment—Upper Portion of Auditorium Hotel, Cleveland, Ohio
Geo. A. Ebeling, Architect

is perhaps the principal material to be used in most modern hotel facades because of its permanency, color and texture values and negligible maintenance costs. The base of the building doubtless will be of stone, but it may not be carried up above the water table—perhaps two or three feet above the sidewalk grade. Stone work may also be used around doors, for the quoins when the cornice of the building is to be emphasized, for a belt course and possibly for some special architectural features such as columns or pilasters. Cast stone or terra cotta can be satisfactorily used in the higher parts of the building, as for the cornices and for decorative inserts in the brick work, to just as good effect and without the initial cost of the more expensive masonry materials. If the main walls are of brick they may be of light or dark color and may be given a great deal of interesting variety through pattern work and through the use of colored mortar or deeply recessed mortar joints. Some of the old Colonial houses were built of common brick which was whitewashed or painted, and this sort of treatment, where appropriate, is very attractive and at the same time economical. Stucco may be used for the main walls of the building over terra cotta blocks or other masonry or fireproof backing and is of course particularly appropriate for Spanish, Pueblo, Mission and some forms of English architecture. It must be of first quality, for poor stucco work is a waste of money and involves considerable maintenance expense, while good workmanship produces a wall of very satisfactory appearance and permanence. Stone is occasionally used for facing an entire building, but only where cut stone can be had at very low cost.

The decorative features of the building facade should likewise be of the best quality. Iron work is often used for balconies, hand rails, ornamental lanterns, sign brackets, and similar features. It requires regular painting to maintain it in good condition, but is very much less expensive than bronze or copper in similar places. The store fronts, however, which are close to the eye and which are subject to wear and abrasion should invariably be of the best materials. Copper or bronze are almost the only materials to use in such places, although occasionally copper bearing steel can be substituted if a painted finish is acceptable. Concrete can be used for various features such as balustrades, terrace walls, lamp standards and fountains. The cost of this material is quite low, and very handsome effects can be produced with it when in the hands of a skillful worker. Cornices, if not built of terra cotta, can very satisfactorily be constructed of sheet metal, either galvanized copper bearing iron, or copper.

The principal problem for the hotel owner to face in developing a satisfactory architectural design for his building is to select a skilled architect and to give him reasonable leeway in suggestion elevations which fit the requirements of the plan and which are appropriate to the site. The owner should forego forcing the architect to carry out special features he may have in mind if the architect advises him that such features are not consistent with the proper treatment of his building. No architect can do his best work if he is forced to graft a Turkish minaret upon a southern Colonial building, but on the other hand it must not be assumed that the architect should be confined to designing his

building in any pure architectural style. It is quite satisfactory to utilize features of various styles when they can be harmonized together to form a tasteful design.

The problem of signs to attract business to a hotel should be considered an architectural problem, although it is seldom put into this category by the average hotel owner. Wherever possible, the sign should be designed as a part of the facade and at least it should be designed in keeping with the style of the hotel both as to its form and the character of its lettering. The sign problem is two-fold. A sign should be such as to clearly mark the location of a hotel for persons passing close to it so that motorists and other strangers to the town may find the building without difficulty. There is often also a need for distinguishing the hotel as to its position in the city from a considerable distance so that people not in the immediate vicinity can approach the building as directly as possible. In many cases this results in a need for two distinct types of signs; one definitely designed to attract the eye of persons on the street in the immediate vicinity, and the other elevated and of such size and position as to be seen for the maximum distance. The first sign may be relatively small, dignified in appearance, and may well be made a part of a marquee or other architectural feature near the entrance to the building. The second type of sign is generally best placed

upon the roof of the building and may even be set back from the face of the building so as not to be visible from the street and in such manner as not to detract from the architectural appearance of the building when seen close by. This sign should be, of course, larger—the letters standing out distinct from each other so as to be read at considerable distances. An alternative to this larger sign for attracting attention from considerable distances is the use of road signs and markers so that motorists and others will find their path to the hotel clearly defined. Often this is the less expensive method and is generally used to a certain extent whether or not a large electric sign is to be used on the building. Architecturally, of course, it is preferable.

Care should be taken in the location of electric signs so that their lights will not be objectionable to occupants of rooms having windows near the sign. Flashing signs, particularly, are objectionable whenever their light can be reflected into bedrooms. Fortunately, the small commercial hotel does not have to compete with high power electric signs such as characterize the "white ways" of great cities and they can get just as much value out of a conservative, well-designed and inexpensive name sign architecturally in style with the building as larger hotels can get with large and often ugly and invariably expensive signs needed where the competition for attention is great or publicity value is high.



The Interesting Sunken Garden of the Coronado Hotel, St. Louis, Mo.
Preston J. Bradshaw, Architect



Tower of The Stevens, Chicago

A GROUP OF TYPICAL MODERN COMMERCIAL HOTELS

FOLLOWING WILL BE FOUND
PLANS AND ILLUSTRATIONS OF
ELEVEN SMALL AND MEDIUM
SIZED AMERICAN HOTELS
OF THE COMMERCIAL TYPE





The Exterior of the Greystone Is Entirely of Indiana Limestone

Hotel Greystone, Bedford, Ind.

Nicol, Scholer & Hoffman, Architects

THIS hotel represents a modern solution of the typical commercial hotel problem in the smaller city. It contains 82 guest rooms of which 26 have bath, 4 have toilet, 3 sample rooms with bath, and 49 rooms without bath. The public portion of the hotel comprises the main lobby with mezzanine gallery, two lobby lounges, two mezzanine lounges, dining room, coffee shop and ballroom. The banquet hall or ballroom, 30x61 feet in size is located directly over the kitchen and is connected with it by elevator and stairs. Sub-rentals have been introduced in the form of three shops (and the coffee shop), facing on the principal street frontage. It will be noted that the coffee shop has direct service from the kitchen.



View in the Lounge

Hotel Greystone

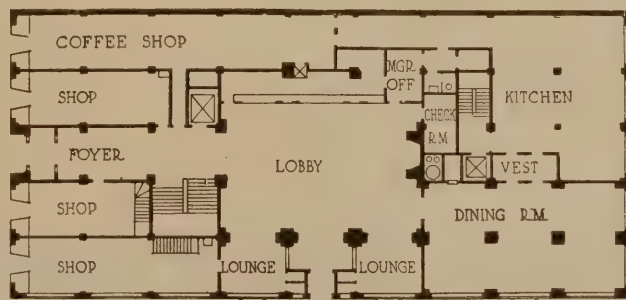
Bedford, Indiana

THE construction of this building is of reinforced concrete with the entire exterior of Indiana limestone, which is quite fitting for a hotel located in the greatest limestone center of the world.

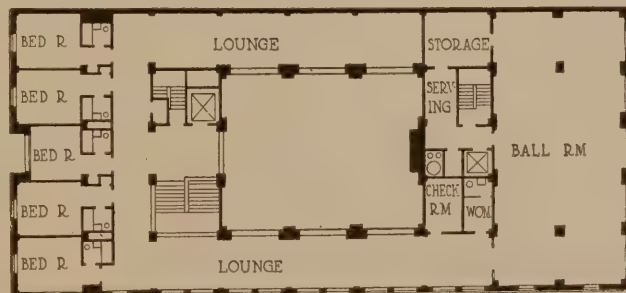
The building was completed about July 1st, 1923, at a cost of approximately \$2,500 a room. The general specifications are of first class type, including terrazzo, marble and tile floors, gum or birch interior trim, and excellent types of heating, plumbing and wiring systems.

The typical floor plan is arranged in a straight corridor layout to fit a long narrow perimeter, and while there are no special features in the planning, this has been carried out with a view to providing an efficient hotel, which should operate on a sound business basis and is probably not too large as the first unit for a town of this size.

The complete contract for the Interior Decorations, Furnishings and Equipment of the Greystone was executed by the PICK-BARTH Companies.



FIRST FLOOR PLAN



MEZZANINE FLOOR PLAN



TYPICAL FLOOR PLAN



Hotel Norfolk

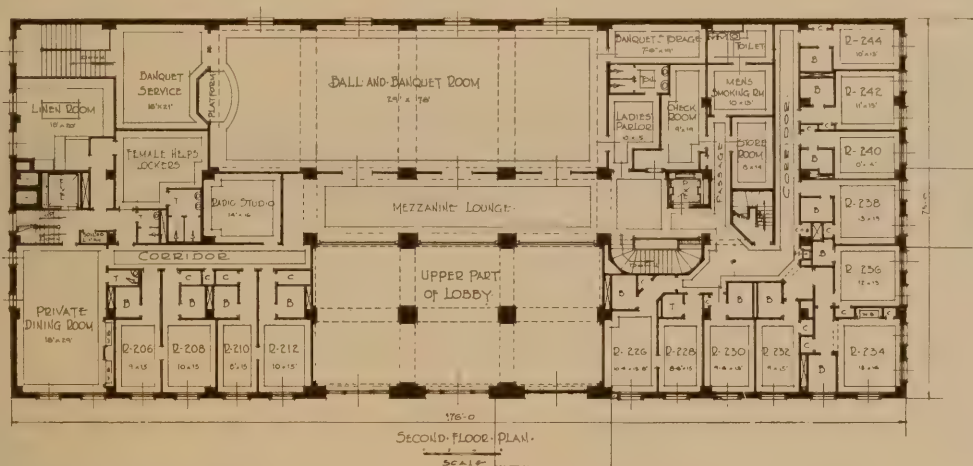
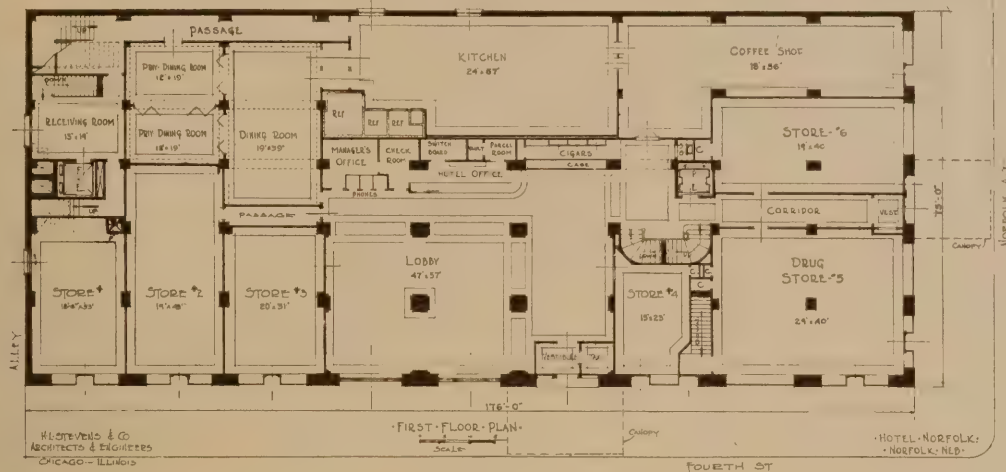
Norfolk, Neb.

H. L. Stevens & Co., Architects

The Hotel Norfolk is a five story building of fireproof construction containing 125 guest rooms of which 73 are with bath. There are five sample rooms. The lobby is wainscoted with walnut to the height of eight feet and is floored with terrazzo. Besides a main dining room, there is a coffee shop, three private dining rooms and a ballroom seating five hundred.

The Norfolk is one of the Eppley Chain hotels, each unit of which has been developed on a very successful basis by a careful study of the various elements of hotel planning and operation, which in their proper combination, provide the kind of service appreciated by commercial travelers. At the same time, the investment is carefully guarded by efficient planning as indicated on the opposite page. Particular care is given in the planning of these hotels to the question of properly adjusting income and non-income producing space. Rooms are carefully proportioned in size, equipment and in the rates, so that accommodations are available for almost all types of travelers, thus maintaining a satisfactory occupancy percentage.

The complete Furnishings and Equipment of the Hotel Norfolk were executed by the PICK-BARTH Companies.



Floor Plans of the Hotel Norfolk, Norfolk, Neb.

THESE interesting plans indicate a careful study of space efficiency and the provision of a good proportion of income bearing space. A large portion of the first floor plan is given over to sub-rental space. In fact, practically the entire plan includes income producing space of one kind or another. The details of space distribution on the typical floor plan is indicated in the small figures above the plan.

FOLLOWING the present trend of hotel design, the Hotel Norfolk has made use of the disappearing beds in various rooms, as may be seen in the above plans (i. e. rooms R34 and R234). An interesting feature is the installation of two disappearing beds in the private dining room on the second floor, allowing this room to be used for overflow sleeping quarters during conventions, etc. The beds used are all of the Recess type.

Hotel Wicomico, Salisbury, Md.

B. K. Gibson & Co., Architects

THIS hotel has been planned on a site of odd proportions and perimeter and every effort has been made to use the space efficiently in order to keep room rates on a reasonable basis and still maintain the property as a paying investment. The basement is laid out to include full service facilities and provides income space in the form of cafeteria, barber shop, billiard room, etc. About one-half of the first floor has been given over to three stores, the lobby being of ample size for its purpose and attractively laid out. The kitchen and dining room are well arranged for access and intercommunication, while from the guest point of view the dining room is well separated from the lobby to give a greater degree of privacy. The typical floor plan includes 13 rooms with bath, 10 rooms without bath and lavatory only, 4 rooms are arranged with one bath serving two rooms. The arrangement of rooms 14 and 15 and 18 and 19 shown on the plan on the opposite page, provide baths in a small entry which can be arranged for access by tenants of rooms without bath if this is found desirable, or the one bath serves two rooms.

The complete contract for the Furnishings and Equipment of the Il Comico was executed by the PICK-BARTH Companies.



EXHIBIT PLAN



Mar 1 1892



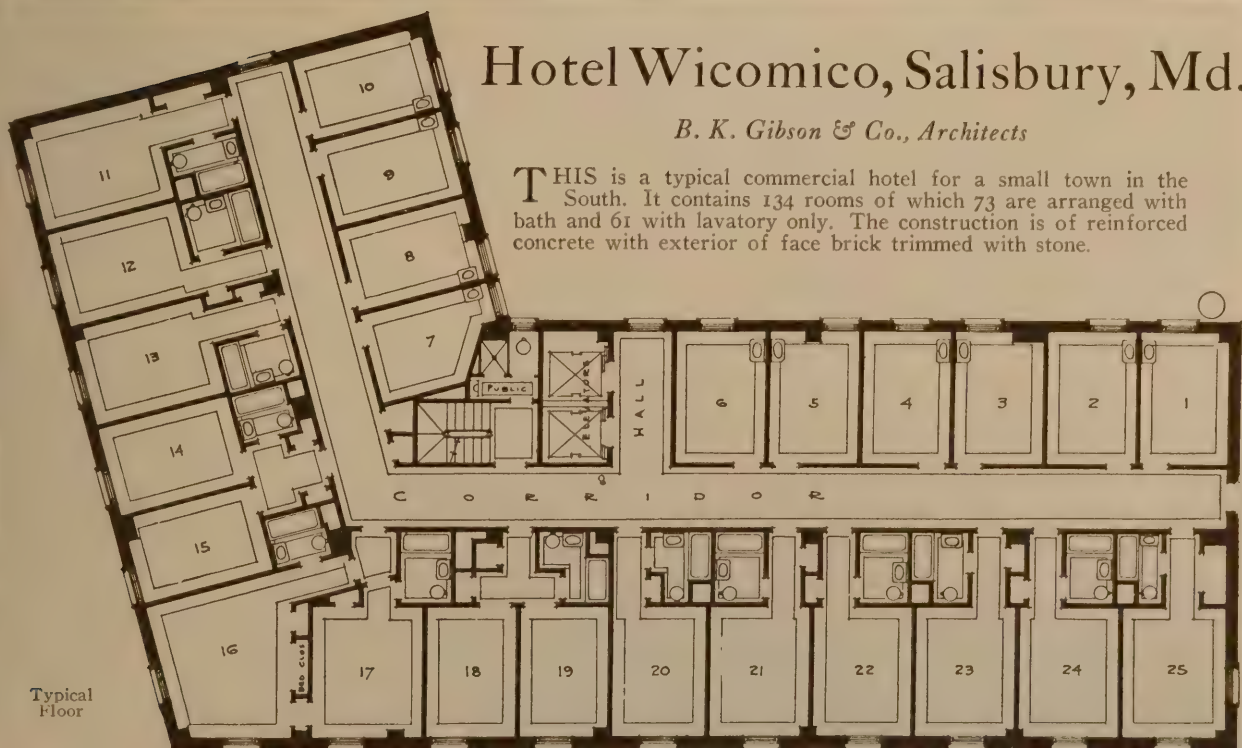
Second, Female Union Wage



Hotel Wicomico, Salisbury, Md.

B. K. Gibson & Co., Architects

THIS is a typical commercial hotel for a small town in the South. It contains 134 rooms of which 73 are arranged with bath and 61 with lavatory only. The construction is of reinforced concrete with exterior of face brick trimmed with stone.





Hotel Fort Armstrong, Rock Island, Ill.

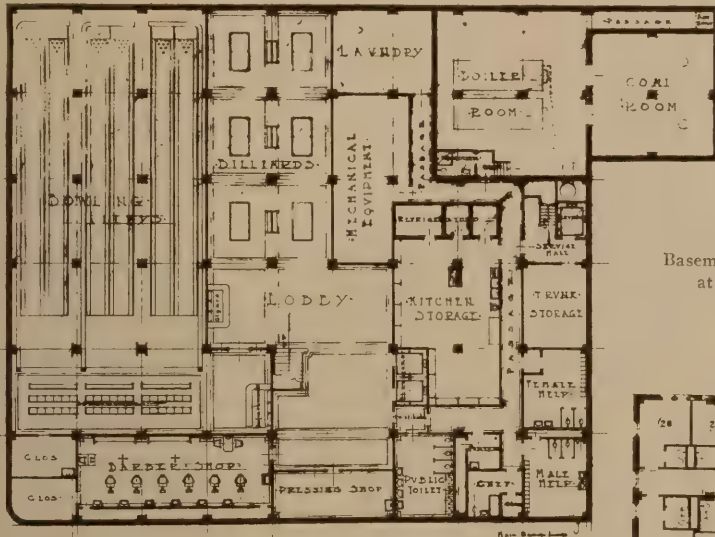
Chas. Wheeler Nicol, Architect

THIS is a commercial hotel of 196 rooms, consisting of 107 rooms with bath, 6 sample rooms with bath, 12 rooms with shower, 24 rooms without bath, and 10 suites equal to 26 rooms.

The building was completed June 1st, 1926, and is constructed with a reinforced concrete skeleton frame, face brick exteriors, trimmed with stone or terra cotta, terrazzo and marble floors in lobbies, terrazzo and tile floors in bath rooms, toilet rooms, etc. Terrazzo floors and stairs, ornamental plaster in public rooms, gum or birch interior trim, stained and varnished or enameled. Good lighting fixtures, splendid decoration of public spaces; highest type of heating, plumbing and wiring system with above average plumbing fixtures, refrigeration, ventilation and in most cases laundry equipment is part of the building cost which was about \$2,600 per room or 44 cents a cubic foot.

Hotel Fort Armstrong

Rock Island, Ill.



Basement Plan

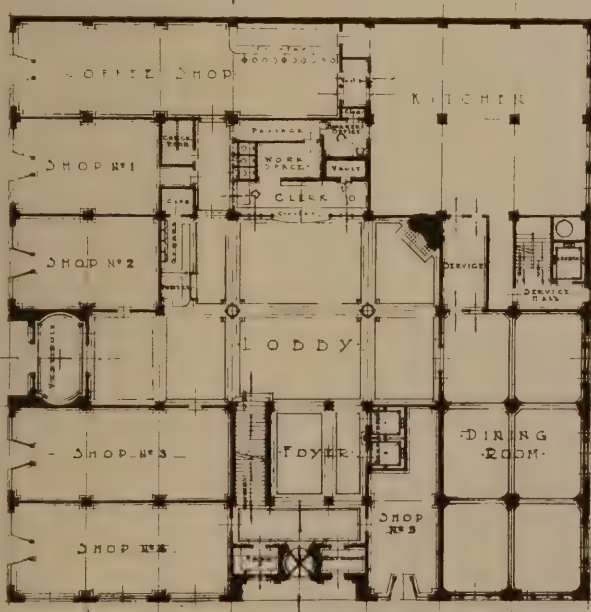
Basement Plan
at Left



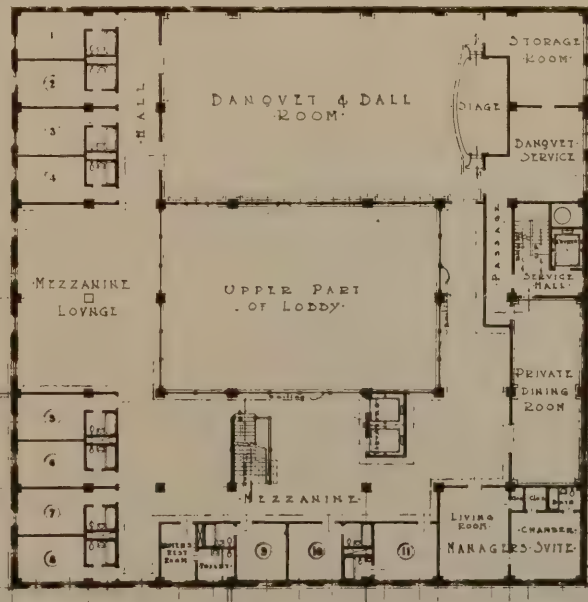
TYPICAL FLOOR PLAN FOR 4-5-6-7th FLS.
Scale 1/8" = 1'-0"

AN interesting feature of the Hotel Ft. Armstrong is the Men's Recreation Room adjacent to the Barber Shop. The six Bowling Alleys and the Billiard Room not only are welcome attractions to the transient guests, but make a bid for local patronage too. Here is an example of basement space being put to very excellent use.

The Food Service Equipment and a large share of the Furnishings of the Fort Armstrong were supplied by the PICK-BARTH Companies.



First Floor Plan



Mezzanine Floor

Plans of the Hotel Manitowoc

Manitowoc, Wis.

*Martin Tullgren & Sons,
Architects*



Typical Floor Plan



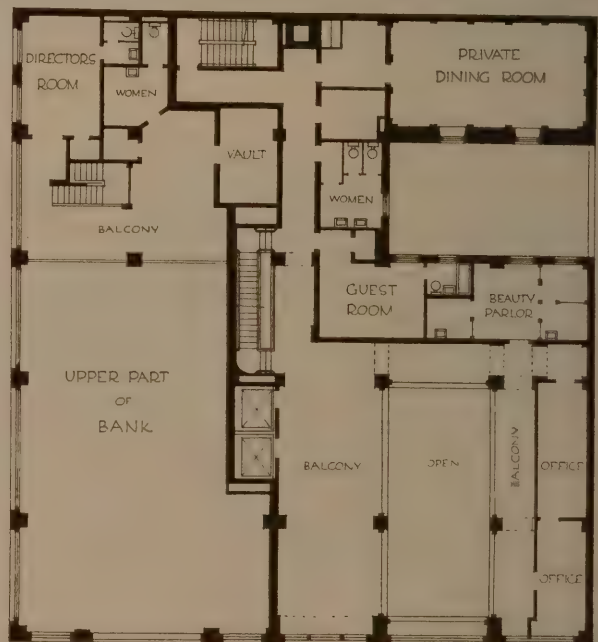
SCALE
0 10' 20'

Basement Floor Plan



SCALE
0 10' 20'

Ground Floor Plan



SCALE
0 10' 20'

Mezzanine Floor Plan



Hotel Manitowoc, Manitowoc, Wis.

Martin Tullgren & Sons, Architects

THIS hotel, containing approximately 120 rooms is designed both for catering to regular commercial trade and to the large automobile tourist traffic which flows over the roads of the state. A considerable part of the lower floors is given over to sub-rental space which has necessitated the locating of the kitchens in the basement. An examination of the typical floor plan shows that rooms are not generally expected to be engaged in suite. The rooms are equipped with bath, but with no clothes closets. Like many other well planned hotels, the Manitowoc makes use of the disappearing bed in the Sample Rooms, in this case a bed of the roller type being employed.

The complete contract for the Furnishings and Equipment of the Hotel Manitowoc was executed by the PICK-BARTH Companies.



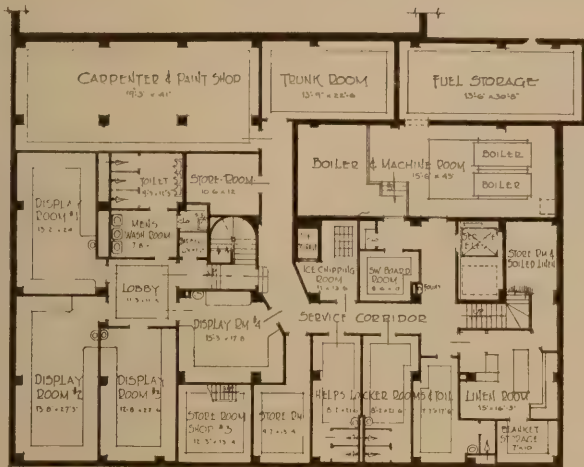
Hotel Bothwell, Sedalia, Mo.

H. L. Stevens & Co., Architects

THIS is a commercial hotel having 109 guest rooms and 75 baths and designed for a city of 25,000 inhabitants. The total investment in the ground and building is approximately \$400,000 with an additional \$90,000 for furnishings and equipment. The building is of modern fireproof construction throughout with exterior of brick trimmed with stone.

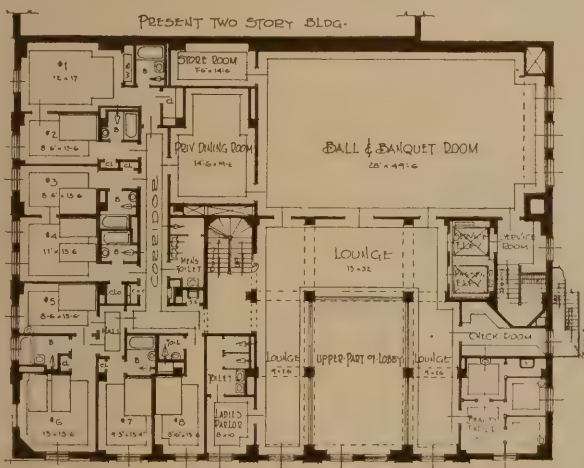
The complete contract for the Interior Decoration, Furnishings and Equipment of the Hotel Bothwell was executed by the PICK-BARTH Companies.

Floor Plans of the Hotel Bothwell, Sedalia, Mo.



Main Floor Plan at Right

ENTERING from the main street one finds well arranged two-story lounge and lobby with various service facilities easily available. A large part of this floor is given over to direct sub-rental space. The mezzanine floor is well arranged with a comfortable lounge and ball and banquet room with the necessary auxiliary space.

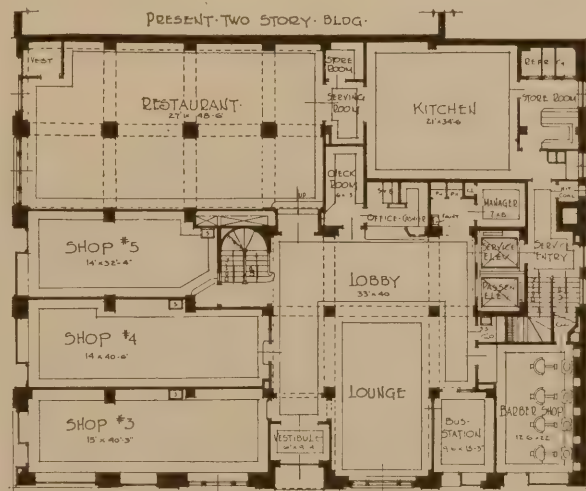


Typical Floor Plan at Right

THIS plan has been very carefully studied to give the maximum of rentable space without sacrifice of facilities necessary for the comfort of guests. Here on a typical floor are found seven rooms with lavatories and 14 rooms with bath, including the corner suite.

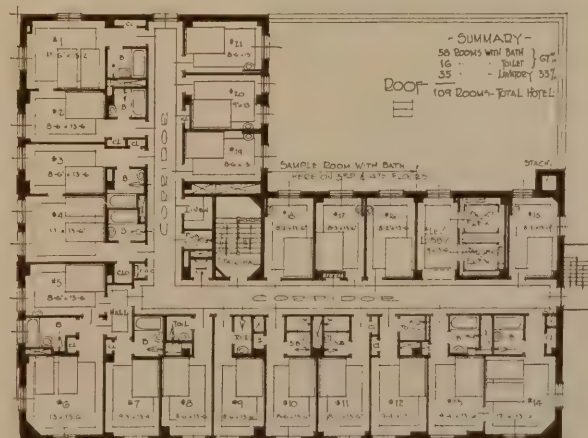
Basement Plan at Left

THIS interesting basement layout has been carefully studied to supply well related service sections. A particularly interesting feature will be noted in the lower left hand corner of the plan. This is an arrangement of four display rooms which obviously are intended for commercial travelers, and probably bring in direct income, thus utilizing what might otherwise be known as non-productive space.

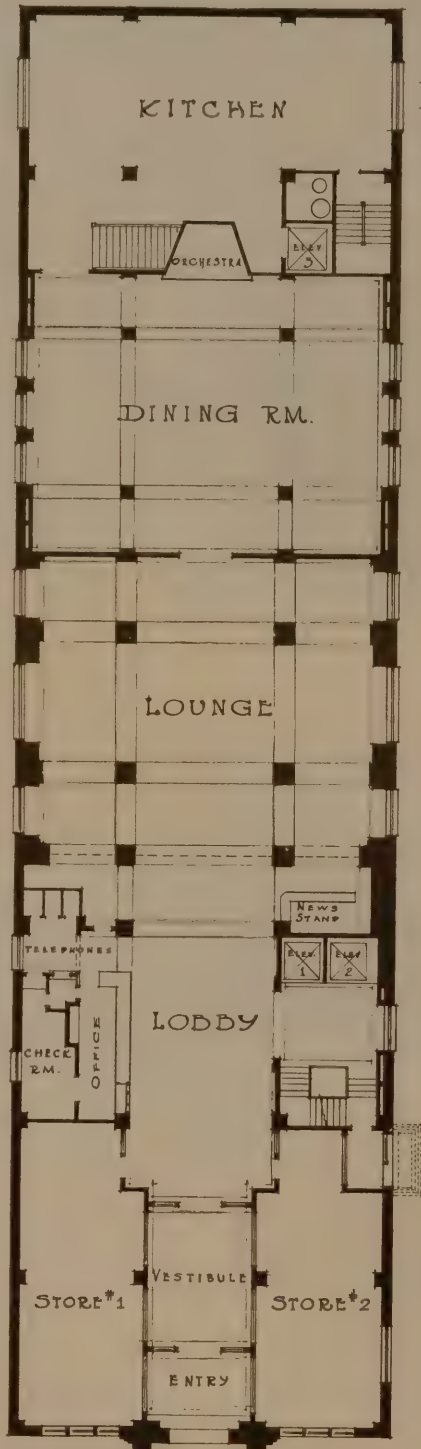


Mezzanine Plan at Left

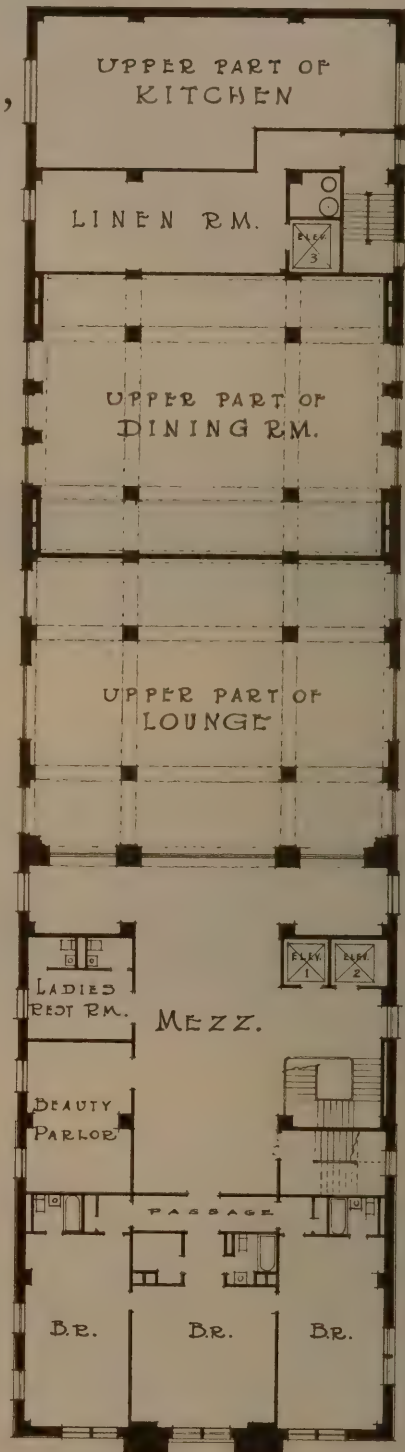
IT will also be noted that in addition to the public facilities on the mezzanine floor there are six guest rooms and a two room corner suite. These plans are efficiently arranged from the investment and operating points of view.



Plans of Hotel Morgan, Morgantown, W. Va.



THE
GROUND STORY
CONTAINS,
(IN ADDITION TO
THE CULINARY
DEPARTMENTS)
CLUB LUNCHEON
COFFEE SHOP
LOBBY AND
BARBER SHOP



SCALE—0 5 10 15 20 25 Ft.

FIRST FLOOR PLAN

THE special features of the plan shown on this and the opposite page include the interesting two-story lounge and dining rooms which could be attractively planned because of the long narrow shape of the building, giving ample light and balanced fenestration on both sides of these rooms. In fact, the entire plan is extremely well balanced because advantage was taken

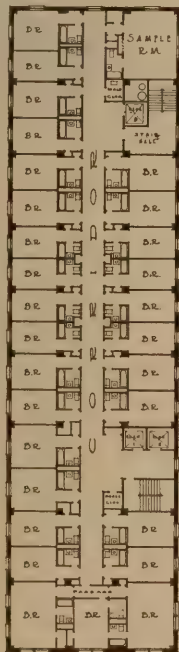
MEZZANINE FLOOR PLAN

of the perimeter shape. The top floor is entirely given over to a ball room or banquet room with the necessary auxiliary service space, and a pleasant roof garden which should be a valuable added feature. This building is designed in simple but attractive architectural style, with exterior of face brick and trimmed with stone.



Hotel Morgan, Morgantown, W. Va.

Holmboe & Pogue, Architects



SCALE 1/8" = 1'-0"

TYPICAL FLOOR PLAN



BALL ROOM FLOOR PLAN

THE Hotel Morgan, as shown on this and the opposite page, is an attractive commercial hotel containing 155 rooms of which 127 have baths, 20 have lavatories only, 5 are sample rooms and there is one 3-room suite. The single rooms are arranged so that five other suites of two or three rooms are also available. The building is of steel skeleton frame construction with curtain walls of hollow tile and exterior of face brick. The floors are of bar joist concrete construction. The building was completed in 1925 at a total cost of approximately \$560,000 and furnishings approximating \$100,000. The building contains 1,081,000 cubic feet and is built on a site 50 feet by 188 feet.

The complete contract for the Furnishings and Equipment of the Hotel Morgan was executed by the PICK-BARTH Companies.

Hotel Altamont, Hazleton, Pa.

THE ground floor plan of the Altamont Hotel is arranged with a large amount of sub-rental space, providing a direct income to offset operating costs. This space includes cafeteria, barber shop, beauty parlor and five large stores and shops. Very little space is given over to the entrance, which leads directly up to the main floor. On the main floor the lobby is found at the head of the stairs and is planned with the lounge to form a large and attractive main room. Stairs again lead up on both sides of the lobby to the banquet room with its auxiliary service space and to the dining room. Two writing rooms are provided on either side of the lounge and a comfortable parlor is arranged for those who wish greater privacy than that of the lounge. This plan, by placing the main floor at a considerable height above the street, has allowed the provision of considerable sub-rental space without sacrificing any of the main floor features.

The complete contract for the Furnishings and Equipment of the Hotel Altamont was executed by the PICK-BARTH Companies.



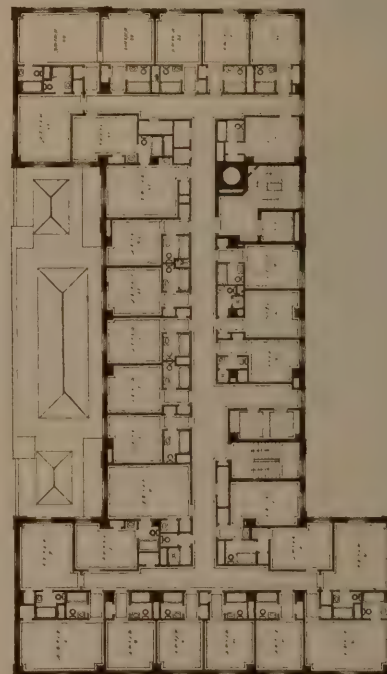
Ground Floor Plan



Main Floor Plan



Mezzanine Floor Plan



Typical Floor Plan



Hotel Altamont, Hazleton, Pa.

Thomas, Martin & Kirkpatrick, Architects

THIS commercial hotel contains 180 bedrooms with bath, five sample rooms and three suites. The building is constructed of reinforced concrete faced with brick and limestone. The public rooms are finished in

travertine and developed in rich decorations. The cost of the building was approximately \$800,000 with land \$150,000 and furnishings \$125,000. Plans will be noted on the opposite page.



Lobby



Lounge

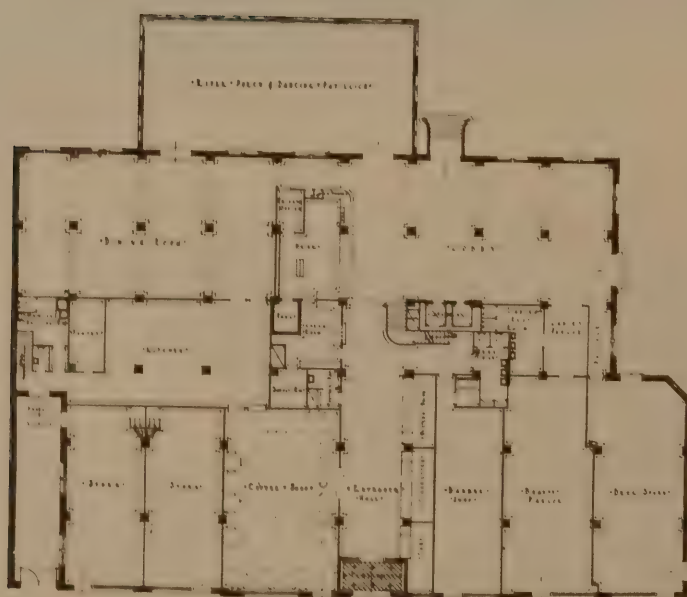


Dining Room



Hotel Blue Bonnet, Kerrville, Texas

Paul G. Silber & Co., Architects



First Floor Plan

*The complete contract for Furnishing and Equipping
the Hotel Blue Bonnet was executed by the PICK-
BARTH Companies.*

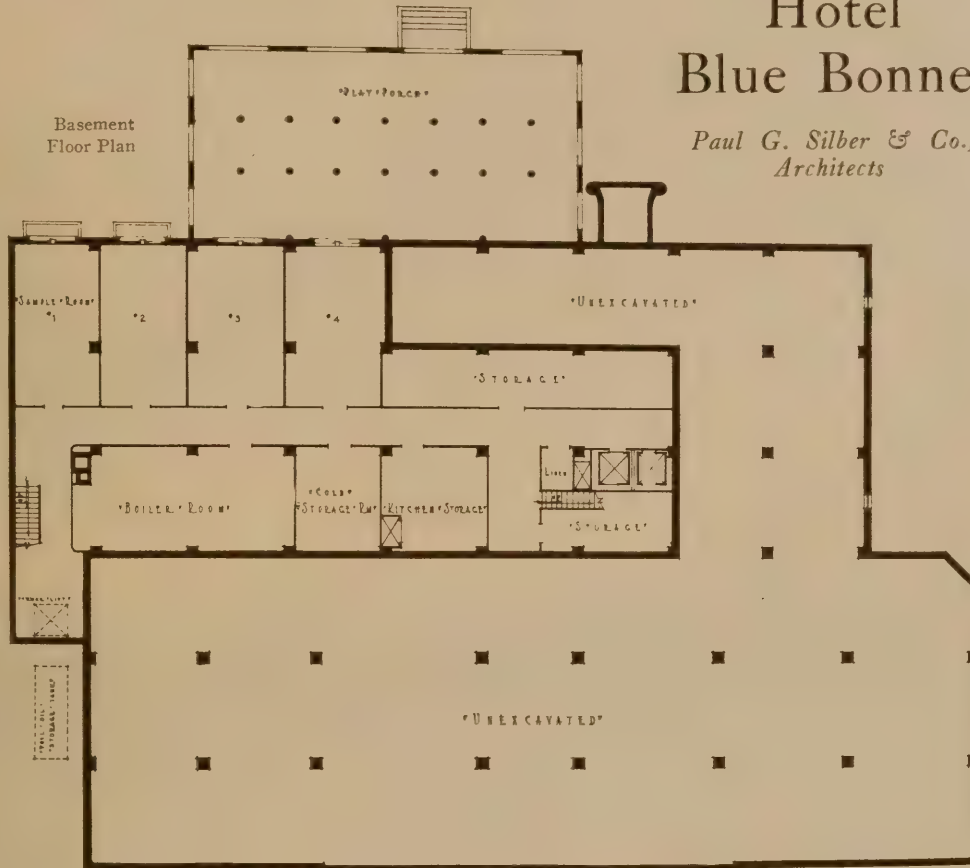
THIS 80 room hotel is built in a mountain resort district of Texas and is typically a comfortable tourist hotel. The construction is of reinforced concrete with panel walls of brick and hollow tile and finished on the exterior with stucco finished with stone and mission tile. Five large stores are provided as shown on the first floor, together with banquet hall and river terrace.

The construction of this five story building provides for expansion by the addition of three more stories which allow an increase of 60 rooms. All modern hotels should be built to allow either vertical or horizontal expansion when business justifies an additional investment of this kind. The plans shown on this and on the opposite page are practical, economical, and at the same time offer excellent accommodations at very reasonable rates.

Hotel Blue Bonnet

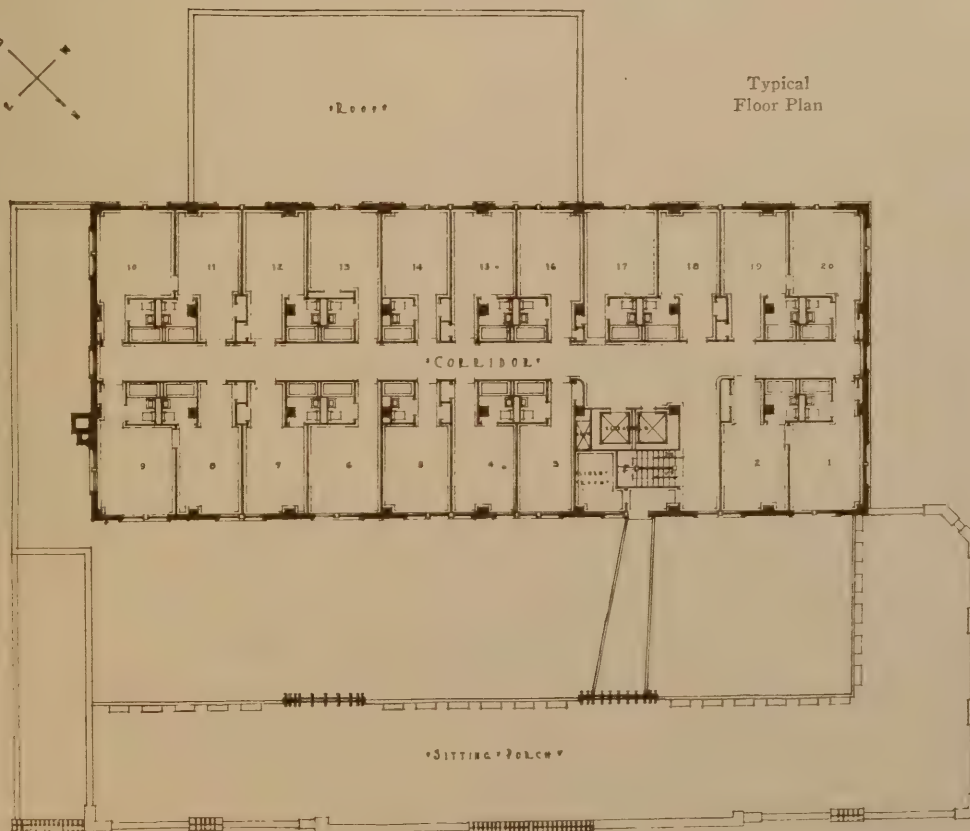
*Paul G. Silber & Co.,
Architects*

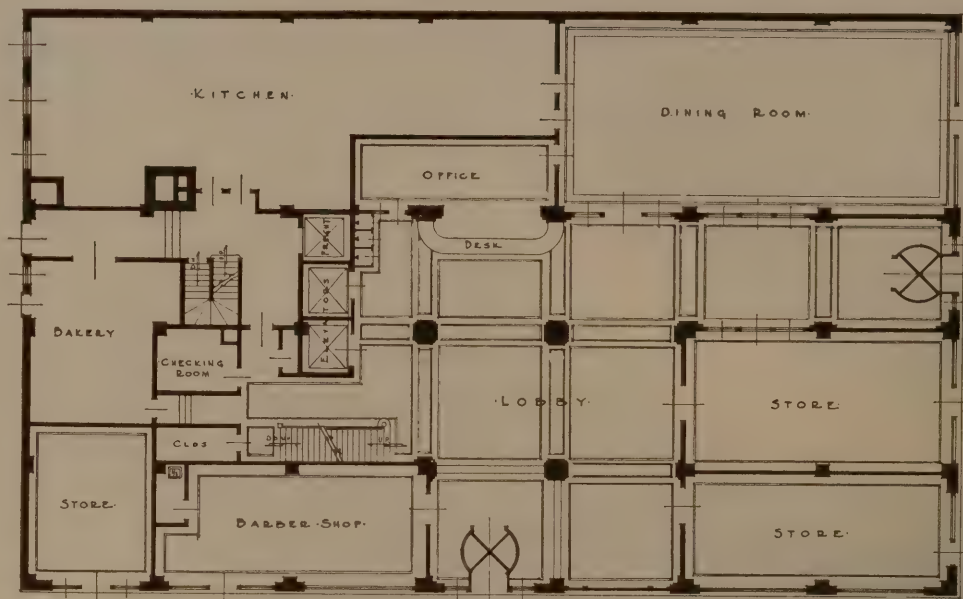
Basement
Floor Plan



Roof

Typical
Floor Plan



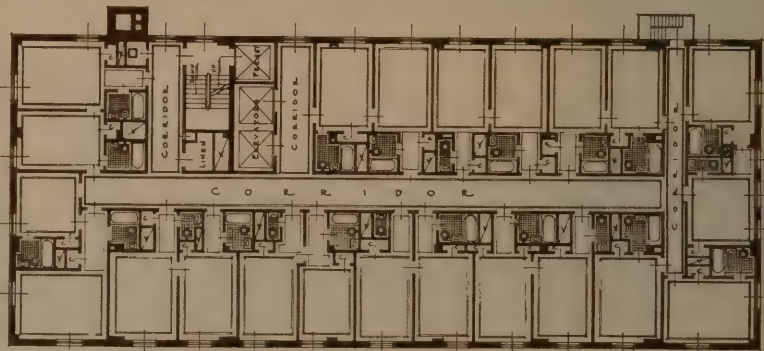


DAVIS AVENUE
FIRST FLOOR PLAN
SCALE 1/8" = 1'-0"

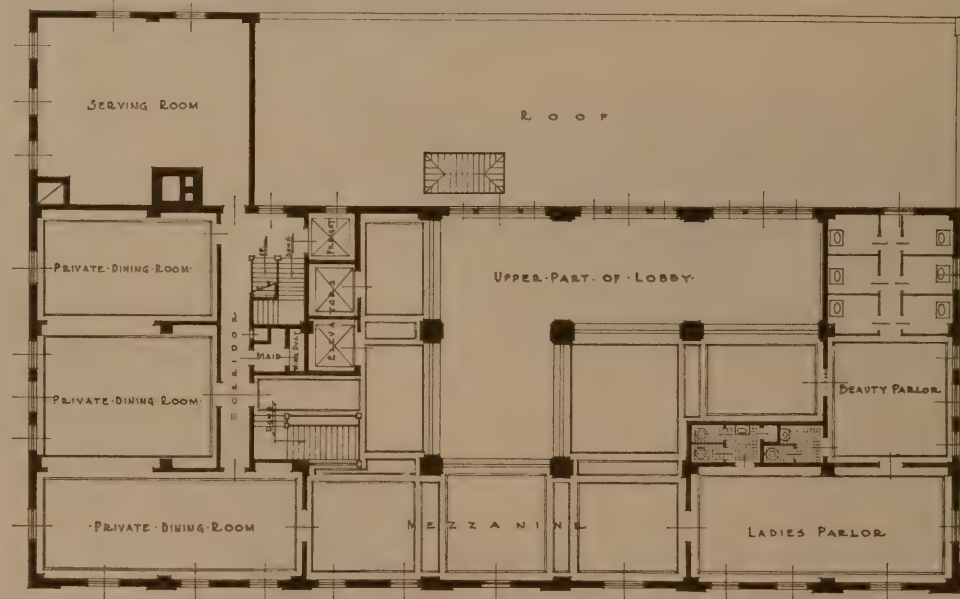
Hotel William Byrd

Richmond, Va.

THIS is a commercial hotel containing 200 rooms of which 144 have baths. Alternate rooms are communicating in pairs. The building has a structural steel frame, fireproofed with concrete and having walls of hollow tile with exteriors of brick, stone and terra cotta. The total cost of the building was approximately \$600,000, or \$3,000 a room, with a cubic foot cost of about 59 cents.



DAVIS AVENUE
TYPICAL FLOOR PLAN
SCALE 1/8" = 1'-0"



DAVIS AVENUE
MEZZANINE FLOOR PLAN
SCALE 1/8" = 1'-0"

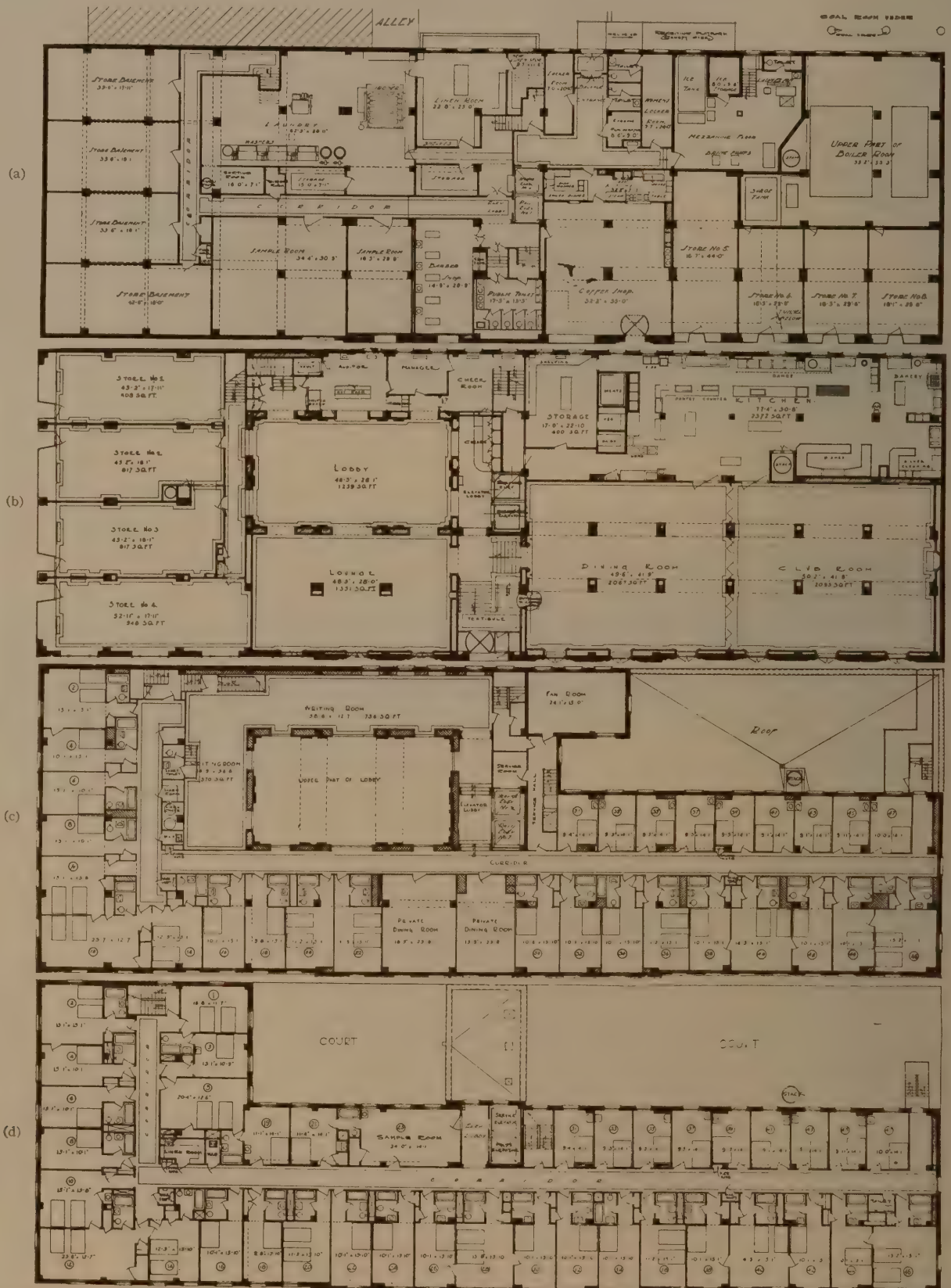
The complete contract for the Furnishings and Equipment of the Hotel William Byrd was executed by the PICK-BARTH Companies.



Hotel William Byrd, Richmond, Va.
Marcellus E. Wright, Architect

Hotel Wausau, Wausau, Wis.

(a) Basement Plan (b) Main Floor (c) Mezzanine Floor (d) Typical Floor





Hotel Wausau, Wausau, Wisconsin

Holabird & Roche, Architects

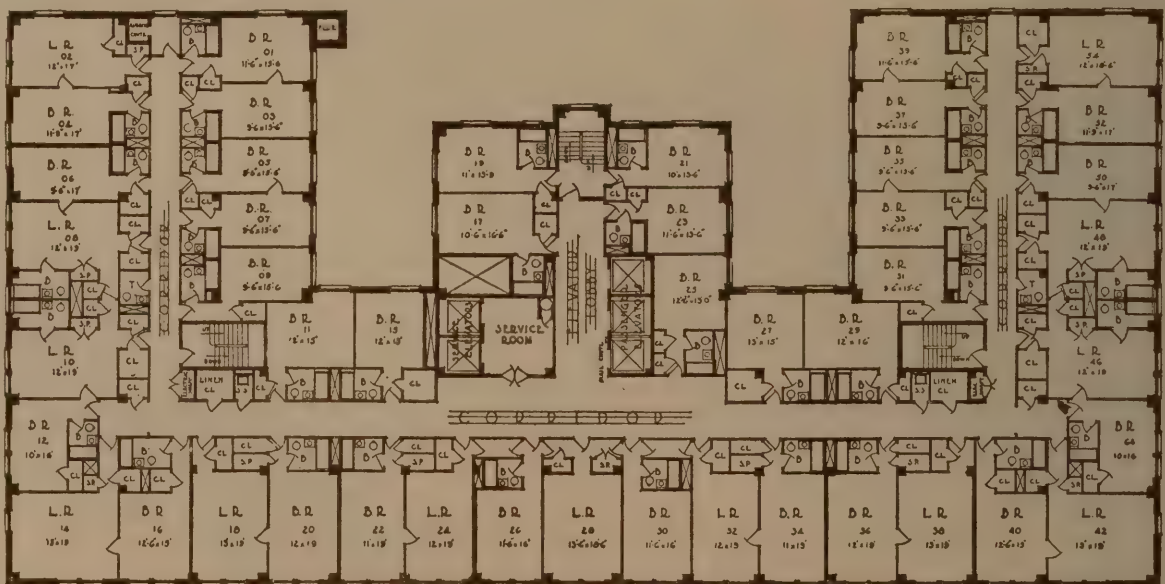
This excellent example of hotel architecture and planning is a part of the Schroeder chain of hotels and contains 257 rooms, of which 187 are with bath. The majority of the Furnishings and Equipment were supplied by the PICK-BARTH Companies.

Leverich Towers, Brooklyn, N. Y.

Starrett & Van Vleck, Architects

THIS is one of the most recent of the fine residential hotels of New York City. It is located in Brooklyn Heights, within quick transportation distance of downtown New York and has been developed particularly to serve those whose business is in the downtown district. The hotel has a magnificent outlook over the bay and is within five or ten minutes of New York's downtown section. The food service is primarily of restaurant character, there being no service pantries as will be seen by examining the plan below. Suites are arranged for the most part in one and two room layouts.

The complete contract for the Interior Decoration, Furnishings and Equipment of Leverich Towers was executed by the PICK-BARTH Companies. (See illustrations on pages 222-223).



Typical Floor Plan

Modern Apartment Hotels

Having passed far beyond the experimental stage, it is apparent that the apartment hotel represents a completely new method of housing in the United States. This type of building is not a visionary venture offering novelty in the way of living. It is rather the solution, or a series of solutions, of distinct domestic problems which have arisen in this country within the past few years.

There are probably two basic reasons for the appearance of the apartment hotel in our larger American communities, both urban and suburban. The first is unquestionably the servant problem which has created well nigh impossible conditions for many families accustomed to maintaining sizable establishments. Overburdened with domestic cares, these families have sought at least during the winter months a type of occupancy which would provide both high class environment and conveniences, and at the same time minimize domestic responsibilities. The apartment hotel has successfully answered this problem.

The second reason for the existence of the apartment hotel is the combination of increased living standards and the ability to pay for them that has been the happy lot of a fairly large group of American citizens, who through the past few years of prosperity have enjoyed good salaries or high profits on business ventures. The trend of housing standards in this country has been constantly upward. Families are moving into better and better apartments and homes, and constantly increasing their aesthetic demands.

Thus, we find that many persons of good income desire not to live in a large dwelling of average plan and appointments, but rather in a more compact and efficiently arranged space that is convenient for the ordinary needs of existence while at the same time presenting decorative appointments that approach luxury. Here again the apartment hotel has met a definite need, because coupled with this desire to live under good appearances, there is usually to be found an unwillingness—and even a lack of the necessary experience—to operate the large dwellings that a few years ago would have been required to provide this environment.

Of course, we find in addition to these reasons, the economic phases that have to do with tremendously increased land values in the desirable residential sections of our larger cities.

These conditions have made it almost impossible to maintain residences where land values are so high, and as a result the apartment hotel has reestablished these desirable residential communities on the natural theory that many fine homes consolidated on a single piece of land must serve to ease the burden on the individual tenant.

So, we find the apartment hotel to be a building which differs from all others in at least the following ways:

The occupancy is of a permanent rather than transient character. It is quite necessary that an impressive appearance be maintained—particularly in the public rooms, which offer visitors the first contact with these new types of homes. In many

buildings of this type which have already been constructed a common error has been made in providing too little public space and in attempting to economize in furniture and decorations. This idea has often been carried to a point where the primary object of apartment hotel design has not been achieved. It is interesting to realize that while public rooms in commercial hotels are usually termed “non-income producing space,” this same term does not well apply to the public rooms of apartment hotels. Such rooms are part of the entertainment space used by the tenant and they represent part of the lease price which he pays. They contribute definitely to the income by making it possible to realize higher rentals per square foot in the actual apartment space. If this statement is questioned, a comparison may be made between the square foot rental in a high class apartment building and the rental per square foot in an apartment hotel in approximately equal location and character. This comparison will show a considerably increased income in favor of the apartment hotel space and this is because people are paying for the use of the public space and for the additional service.

There are three distinct types of apartment hotels (aside from bachelor hotels which are discussed in the next chapter). These include the apartment hotel which offers full restaurant facilities but no housekeeping facilities in the apartments; the apartment hotel which has both restaurant and full private housekeeping facilities; and the apartment hotel which has partial private housekeeping facilities such as serving pantries. Because of the unusually expensive land, construction, equipment, furnishing and decoration which are elements of almost every apartment hotel, it becomes necessary to study space efficiency to the end that the maximum of living comfort and service shall be provided at a relatively reasonable rental rate. Therefore, we find these buildings calling more definitely than any other type for so-called efficiency equipment that is designed to provide high class service with the greatest possible element of space saving.

It is quite evident that the apartment hotel idea while still relatively in its infancy is here to stay. Unquestionably the next few years will see an unusually rapid development of this type of housing because the economic conditions which have been its cause are rapidly growing in force, establishing year by year larger and larger numbers of families and individuals for whom the apartment hotel is the solution of the individual domestic housing problem. Here is an easier way to live, and when this desire is coupled with the ability to pay for such accommodations, it becomes evident that investments in buildings of this character may be made profitable.

It is equally true that apartment hotel projects can be overdone in any given community both as to number and to the type of service rendered, but in logical localities where interest in such buildings is not artificially stimulated for purposes of promotion, there is every reason to expect only success.

The Belcrest Apartment Hotel

Detroit, Mich.

Chas. N. Agree, Architect

Typical Plan Showing Arrangement of Suites



THE Belcrest, as illustrated on this page, is twelve stories in height above the basement. It is built of reinforced concrete, fire-proof construction throughout, and finished on the exterior with pressed brick and terra cotta trim. It contains 396 rooms and 135 bathrooms, divided into suites of 1, 2, 3, 4 and 6 rooms having kitchenettes and dining alcoves. In the rear of this building there has been built a garage housing 120 cars for the exclusive use of tenants.

The complete Furnishing of The Belcrest was executed by the PICK-BARTH Companies.



Entrance and Exterior of the Belcrest

Chapter IV

Analyzing the Apartment Hotel Project

PERHAPS even to a greater degree than any other type of hotel, the apartment hotel project needs extremely careful analysis before the owner is actually committed to the venture. The primary reasons for this condition are, first, that the average apartment hotel project represents an extremely large investment, there being comparatively few small buildings of this nature; and, second, because the nature of occupancy is presupposed to be more or less permanent. This introduces a new element into the hotel field—that of *leasing* as opposed to the usual transient business. The fundamentals of the apartment hotel investment are different from all other types of hotels and previous hotel experience is no guarantee of successful operation.

This comparatively new and ultimately very important division of the hotel field has developed to meet changed living conditions in a certain strata of the American public. The so-called apartment or residential hotel differs both from the apartment building and the commercial hotel, as described in accompanying text and plans.

It is argued by some hotel men that the term “hotel” should not be applied at all to buildings of this nature—that they are in reality apartment houses with special service features. The reasons advanced for this argument is that full hotel service is not usually maintained in such buildings and in many instances furniture is owned by the tenant and he leases vacant space instead of the usual furnished hotel rooms.

On the other hand, there are good reasons why the use of the word hotel in connection with this type of apartment building has developed. The first and general reason is that food service is usually an important factor, and with the combination of restaurant and room service, most of the essential requirements for the definition of a hotel are met. So far as we know, the term hotel has never been given a clear or legal definition, and it would seem that having met popular favor and already being in extensive use, buildings of the nature described in this article will continue to be known as apartment hotels or residential hotels for many years to come.

Another reason for the use of the term “hotel” in this connection is that in some places local building codes and regulations are more liberal of interpretation for hotel buildings than they are for apartment buildings. This has been the general bone of the lengthy contention in New York City where apartment buildings are classified under the Tenement House Law with many restrictions, and hotel buildings coming under another classification offer much more liberality in planning from the point of view of the apartment building investor.

There is neither space nor time now to discuss the intricacies of the New York situation. What the ultimate end of this controversy may be is difficult to anticipate at this writing, but in all probability there will be some drastic changes in the tenement house law and perhaps even in the regulations governing the planning of hotel buildings.

Examples of Investments in Apartment Hotels

The following examples of investment distribution are taken from the records of various successful apartment hotel operations. They will serve to give some idea of the average investment requirements for such buildings.

Size, Type and Total Cost	Land	Building	Furniture and Equipment
1. 12 story and basement, T plan, 1 wing 48 ft. x 136 ft., other wing 48 ft. x 104 ft., 396 rooms, 135 baths, reinforced concrete and brick; 1-2-3-4 and 6 room apartments. 1925—TOTAL COST \$2,200,000.	\$245,000	\$1,680,000	\$275,000
2. 20 story and basement, 100 ft. x 175 ft.; 640 rooms and 327 baths; steel, concrete and brick; 147 kitchens, apartments 1 to 4 rooms. 1926—TOTAL COST \$3,485,000.	\$385,000	\$2,560,000	\$540,000
3. 7 story and basement, H plan, 1 wing 40 ft. x 130 ft., other 2 wings each 60 ft. x 140 ft. Concrete skeleton, brick curtain walls, 250 rooms, 104 baths, 1 to 3 room apartments. 1925—TOTAL COST \$1,300,000.	\$220,000	\$1,000,000	\$180,000
4. 12 story and basement, U plan, 96 ft. x 160 ft., reinforced concrete with curtain walls of brick and tile, 310 rooms, 280 baths, 30 living rooms. 1925—TOTAL COST \$1,695,000.	\$320,000	\$1,085,000	\$290,000
5. 14 story and basement, L plan, 131 ft. x 149 ft.; wings are 82 ft. and 51 ft. wide; 426 rooms and 167 baths, reinforced concrete, brick walls, each apartment has kitchen. 1926—TOTAL COST \$1,742,000.	\$240,000	\$1,207,000	\$295,000

1. Factors Influencing the Selection of a Site for an Apartment Hotel

Suggestions covering points which should be carefully considered in selecting the site for an apartment hotel building. These points have been developed after a practical study of actual operating experience, and while they will not all apply to each individual project, they will serve as a check-list to insure careful preliminary analysis.

ANALYSIS OF LOCAL CONDITIONS	CONDITION OF INDIVIDUAL SITE	GROSS INCOME	GENERAL
<p>What is the trend of development in the particular district?</p> <p>Has it a proper degree of social standing as a location for the homes of the type of people considered as tenants?</p> <p>Are the transportation facilities convenient, adequate and comfortable?</p> <p>Close to active life of city or frankly suburban neighborhood? Definitely high class residential? Quiet and privacy at night?</p> <p>Garage facilities near by if possible?</p> <p>High class shopping and marketing facilities near by? Restricted against business encroachment?</p> <p>Within accepted high rental districts?</p> <p>Easy access to theatres and restaurants?</p> <p>No smoke or fumes from nearby manufacturing?</p> <p>Good buildings in neighborhood probable?</p> <p>Condition of adjoining property or future adjoining buildings?</p>	<p>Availability of proper electric, gas and water supplies with ample sewage facilities.</p> <p>Lot, size and shape for practical perimeter.</p> <p>Subject to proper orientation.</p> <p>Facing park or wide boulevard.</p> <p>Adjoining church or permanent low buildings.</p> <p>If not, buy adjoining lots to protect light and air.</p> <p>Soundings if necessary to determine excavation conditions.</p> <p>APPRaisal DATA</p> <p>Well established and increasing land values.</p> <p>Favored location for mortgage loans.</p> <p>Logical location for type of building.</p> <p>Land cost commensurate with rental market.</p> <p>Appraised by recognized local real estate authority.</p>	<p>What type of rentals will probably be offered?</p> <p>(a) Unfurnished leases</p> <p>(b) Furnished leases</p> <p>(c) Transient facilities</p> <p>(d) Combinations of the above</p> <p>If function, is the location properly related for both long term and transient guests or tenants?</p> <p>Is there a real demand for such occupancy?</p> <p>Can local rentals justify this investment?</p> <p>Can stores and shops be omitted?</p> <p>Can stores and shops be profitably rented?</p> <p>Can restaurant be sub-let or open to public?</p> <p>Can high class lunchroom operate profitably?</p> <p>Is there a logical class of prospective tenants?</p>	<p>Experience of other buildings in similar locations.</p> <p>Opinions of experienced realty managers.</p> <p>Will landowner help in financing by subordinating part or all of land cost?</p> <p>Will it be necessary to buy adjoining buildings to protect light and air?</p> <p>Is the cost of the land properly related to the cost of the proposed building?</p> <p>If the land cost is high, is it feasible to build a structure large enough to maintain the proper relationship?</p> <p>Are there local building codes or other restrictions which prevent building high structures on costly land?</p> <p>Are there local tenement house laws or other restrictions which prevent house-keeping facilities such as kitchenettes?</p>

2. Factors Which Affect Basement, Main and Typical Floor Plans (Apartment Hotels)

Suggestions covering factors which influence basement, ground and typical floor plans. Note suggestion in accompanying article on importance of developing first a detailed written synopsis of the projected plan.

TYPICAL APARTMENTS	FOOD SERVICE	OTHER SERVICES	PUBLIC SPACE	SUB-RENTALS	MISCELLANEOUS
<p>Determine what rental plan is to be used, i. e., unfurnished apartments, furnished apartments, and transient service.</p> <p>Determine what proportion of the rentable space in the building is to be allotted to each of the above.</p> <p>For each of the above classifications determine the logical range in the number of rooms per apartment.</p> <p>In each classification determine the relative number of apartments of each size which would seem practical from a renting viewpoint.</p> <p>Establish standard sizes desirable for typical rooms. (This can be done by establishing approximate number of square feet in a floor area to be allotted to living room, dining room, kitchenettes, bedrooms, etc.)</p> <p>From the above data build up standard units from which the logical shape of the perimeter of the building may be established.</p> <p>Remember that light and air are highly important. Also good vistas where possible.</p> <p>Determine closet space for each apartment—remember this type of tenant requires large closets.</p>	<p>Required kitchen space and storage facilities.</p> <p>Space requirement for restaurant, lunch rooms, tea-rooms, etc.</p> <p>Will there be raw food service for tenants? If so, what space requirements?</p> <p>Number and location of service elevators.</p> <p>Kitchen or kitchenette space to be allowed in each apartment.</p> <p>Location of incinerator shafts, ventilating stacks, etc.</p>	<p>Plan space for General or private laundry rooms with dryers.</p> <p>Trunk storage rooms.</p> <p>Valet (in large building).</p> <p>Maid service to apartments.</p> <p>Servants' quarters for private domestic help.</p> <p>Rooms and lockers for various employees.</p> <p>Children's playroom.</p> <p>Hallroom.</p> <p>Garden courts.</p>	<p>Main lobby.</p> <p>Reception room for visitors.</p> <p>Restaurant or tea room open to public.</p> <p>Arcade, lounge or special features.</p> <p>Switchboard and telephone booths.</p> <p>MANAGEMENT</p> <p>Executive offices.</p> <p>Superintendent's quarters.</p> <p>Maintenance department.</p>	<p>Restaurant.</p> <p>Lunch or tea room.</p> <p>Coffee and pastry shop.</p> <p>Valet and barber.</p> <p>Other concessions.</p> <p>Retail stores and shops.</p> <p>Physicians and dentists on ground floor.</p> <p>Clubrooms.</p> <p>Turkish baths.</p> <p>Roof garden.</p> <p>Furnished apartments.</p>	<p>Shape and size of lot.</p> <p>Value of land.</p> <p>Orientation, air and light.</p> <p>Heights of adjoining buildings.</p> <p>Character of adjoining occupancies.</p> <p>Required rental per sq. ft.</p> <p>Advisability of partial hotel plan and service.</p> <p>Local hotel plan and building codes.</p> <p>Local insurance requirements.</p> <p>Structural system adopted.</p>

3. Business Elements Affecting Plans and Specifications (Apartment Hotels)

PLANNING is the key to rental appeal and profits. Specifications cut maintenance and depreciation costs if good materials and equipment are used. Proper layouts and equipment will cut operating costs. This is the main objective—to design a *profitable* building!

Investment	Financing	Income	Operating Costs	Maintenance	Miscellaneous
Total Investment How much for land and excavations? How much for building? Allowance for furniture and decorations Cost of restaurant and kitchen installation Other special costs Net building margin	Are impressive sketch-plans required for: Mortgage applications Mortgage bond issues Cooperative selling Leasing before construction If cooperative— Apartment layouts to suit tenant-owner If space is sublet— Layout to suit tenant	<i>Primary sources</i> Apartment rentals Furnished apartments Restaurant-food service Retail stores and shops <i>Secondary sources</i> Concessions Physicians' offices Ballroom Club quarters	Heat and hot water Refrigeration Food service Elevator service Door and lobby service Superintendent Janitor service Garbage disposal Window cleaning Maid service Linens, laundry, etc. (if operated on hotel plan)	Plant upkeep and repair Furnishing and upkeep of public space Redecorating apartments Repairs—plumbing and other installations Exterior upkeep Keep down expense by original use of good materials and equipment	Is building for speculative or investment purpose? Exterior should be good but not lavish Clever planning and modern equipment only can make the restaurant pay Stores are not desirable Public space should be cut to a minimum

4. Special Equipment and Features Tending to Increase Apartment Hotel Rentals

Following are suggestions covering points which appeal to the tenant of an apartment hotel and increase the rental income by justifying higher rents and decreasing vacancy charges and rental competition.

In Plan	Living Rooms	Bedrooms	Kitchenettes	Service	Miscellaneous
Ample light and air Attractive entrance Good elevator location Foyer in each apartment Living room 300 sq. ft. or over Bedroom 220 sq. ft. or over Ample closet space and 35 sq. ft. minimum Large bathroom Large kitchenette Separate service door Dressing closets (where door beds are used)	Large, oblong, at least 300 sq. ft. Good floors Fireplace and screen Simple, attractive mantel Good, restrained hardware Simple side wall lighting Avoid over-ornamentation Electric outlets—3 or more Wall space for large pieces of furniture Concealed radiators Ample windows Good painted or papered walls not over-paneled	Size and wall space for full furnishing Large closets Conservative decoration Concealed radiators Ample light Cross ventilation Overhead and side wall lighting Electric outlets, 2 or more Bathrooms Ample size, good fixtures Electric outlets (2 or 3) Tiled floor and walls Overhead and side lights Always provide shower	Large enough to function as real kitchens Full equipment built-in Refrigeration Garbage disposal Service door Dining alcove Gas range Kitchen cabinet Built-in ironing board Electric outlets, 3 or more Floor, sanitary and cleanable Walls, washable finish Ventilation Light, large overhead Dishwashing machine	Laundry, general or private rooms with dryers Storage room in basement Food service in restaurant Food service to apartment Uncooked food service Package and mail deliveries Maid and cook service Cleaning apartments Coal and wood for fireplaces Window cleaning Furnishing apartments Ice water supply Vacuum cleaning	Convenient electric switches Telephones in foyer and bedroom Cabinet service doors Supply cooking utensils Generous closet space Impressive exterior and entrance only good if inside is good Efficient elevator service Switchboard telephone service Efficiency planning for double-utility space Generous heat and water supply Attractive restaurant Efficient main kitchen

Typical Investment, Income, and Operating Cost Figures

An Apartment Hotel with Sub-Rental Space

Description of Building

The total investment in this building is \$2,500,000. Size of plot 100x150 feet; height 14 stories above curb. The cellar contains the usual space for mechanical equipment and service—no laundry and help accommodations other than locker rooms. The first floor contains five shops, a bank, a restaurant, kitchen, private dining rooms, writing room, small lobby, cigar counter and doctor's suite. Each of the typical room floors contains suites of one, two, and three rooms. All suites have serving pantries and spacious closets. Living rooms average 13x22 feet, chambers 12x17 feet. Three room suites contain two baths. Roof contains sun parlor but no apartments.

Sub-Division of Annual Income

Apartments

39 three-room apartments, 78 two-room apartments, and 169 one-room apartments. Total 442 rooms, 312 baths. These rooms each bring an annual income of \$1200, and allowing 20% for vacancies, the annual room income is \$425,000.

Sub-Rentals

5 Shops\$30,000
Bank 12,000
Doctor Suite 3,000
Total annual income from sub-rentals..... 45,000

Food Service

The annual gross sales of restaurant service, room service, and private dining room service totals approximately \$25,000.

Miscellaneous

Telephones, cigars, newspapers, etc. Annual Income\$ 2,000
TOTAL ANNUAL INCOME..... 497,000

Annual Operating Costs

Interest Charges

First Mortgage \$90,000; Second Mortgage.....\$30,000

These are estimated for the first year only. Additional allowance must be made for amortization of mortgages amounting to approximate annual charges of 2½% to 4% of the first mortgage and 5% to 10% of the second mortgage. This amortization will automatically reduce the annual interest charges, unless the financing is arranged on a different basis. Sometimes the annual interest payment and the annual amortization is arranged so that when added together, the same amount is paid each year.

Taxes\$43,000

Payroll (including management, housekeeping and mechanical) 30,000

Restaurant operated by the hotel management

Maintenance and Depreciation..... 23,000

Insurance 7,000

Power Plant 14,000

Note: The above figures will give some idea of principal expenditures in the maintenance and operation of an apartment hotel. On the opposite page there will be found similar figures for another apartment hotel which has no sub-rental space.

It is highly important to note, however, that buildings of the apartment hotel type seem to have appealed very strongly to a number of speculative builders and investors in New York City, and from this combined experience many interesting lessons are to be learned, which will have direct application in any section of the United States.

Apartment hotels offer a number of interesting comparisons with commercial hotels both as to their planning and their business administration. In the first place, there are three types of room rental income under which apartment hotels are operated, either using one type exclusively or combinations of the following described methods of renting. These types include apartments without food service (central restaurant only); food service to rooms (with serving pantries) and full kitchen or kitchenette equipment.

Apartments in hotels of this type usually range from one to four rooms, having one, two, or even three baths, and presenting primarily a solution of the domestic servant problem. The real reason for the apartment hotel is the demand for some form of joint or cooperative service to meet the scarcity of domestic employees. The secondary reason is the possibility of achieving through ingenious planning a degree of luxury and convenience never before available at such a relatively low monthly cost. Because of the nature of service and facilities offered in the apartment hotel, a family may lease a space consisting of a large living room, bedrooms, and even a dining room if required, forming a unit in a luxuriously appointed building, conveniently located and quite impressive from every point of view. Here the tenant may elect to use the restaurant; to have food cooked in the main kitchen and serviced through the

private serving pantry; or even to carry on housekeeping activities using small kitchenettes for the purpose, and often having the raw food supplied through a central purchasing department located directly in the hotel.

The rentals in this type of building are usually leases either furnished or unfurnished. In many of these buildings too a transient service is provided so that accommodations may be had by the day, week, month or year, as desired. The policy as to room rental methods is determined entirely by local conditions which must be carefully studied before an apartment hotel project is carried out. It is obvious, however, that if 50% or 60% or even more of the space in a hotel building can be leased for periods of one or more years, this guaranteed income serves to relieve the business situation and will practically carry operating and maintenance costs without further worry. The balance of the space may be rented on a short term basis, or even on a transient basis, or, of course, the entire building may be leased if the demand is sufficient to fill vacancies.

In the planning and equipping of buildings of this nature, space saving and convenience become paramount issues. Nowhere does the science of efficiency planning and the use of space saving conveniences find a better application and adaptation than in apartment hotels. Hence, as might be expected, there are to be found in buildings of this type some of the most ingenious uses of skillfully designed kitchenettes; door beds and dressing closet arrangements; and convenience equipment of all kinds designed to provide for the tenant the maximum of attractive, livable space with all possible utility, comfort and even luxury within restricted floor areas.

It is perhaps to be anticipated that due to the suc-

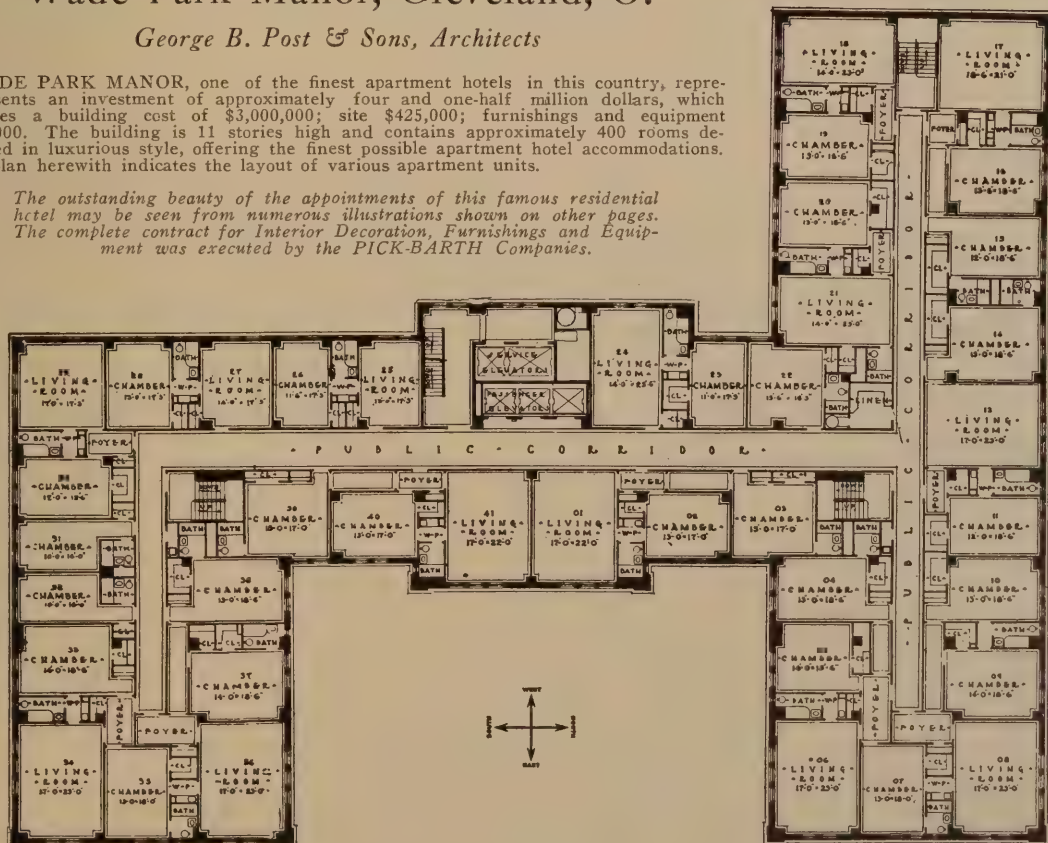


Wade Park Manor, Cleveland, O.

George B. Post & Sons, Architects

WADE PARK MANOR, one of the finest apartment hotels in this country, represents an investment of approximately four and one-half million dollars, which includes a building cost of \$3,000,000; site \$425,000; furnishings and equipment \$650,000. The building is 11 stories high and contains approximately 400 rooms developed in luxurious style, offering the finest possible apartment hotel accommodations. The plan herewith indicates the layout of various apartment units.

The outstanding beauty of the appointments of this famous residential hotel may be seen from numerous illustrations shown on other pages. The complete contract for Interior Decoration, Furnishings and Equipment was executed by the PICK-BARTH Companies.



Typical Floor Plan

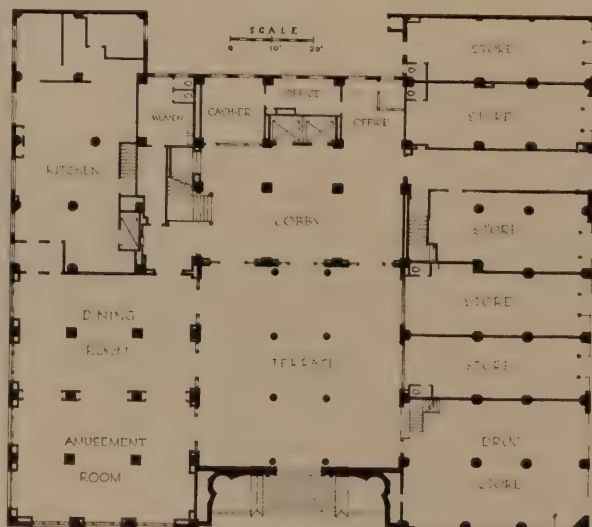
Arcady Apartments, Los Angeles, Cal.

Walker & Eisen, Architects

THIS is a residential hotel designed for a high type of patronage. It is interesting to see that the kitchenette apartment idea has been considered entirely in harmony with this idea, just as with the Gaylord, another Los Angeles hotel designed by the same architects and shown on pages 118-119 of this book; as may be seen from the typical floor plan below, the apartments range in size up to three rooms and kitchenette, the majority, however, being of one and two rooms. In some cases, disappearing beds afford the main sleeping accommodations, and in others they are provided in addition to a regular bedroom. The Amusement Room on the main floor adjacent to the Dining Room is an unusual feature of the plan.



The contract for the furnishings of the Arcady Apartments was executed by the PICK-BARTH Companies.



Main Floor Plan



Typical Floor Plan

cess of existing buildings of this nature and the growing demand for this type of centrally serviced living quarters, there may be expected a great growth in the apartment hotel branch of this industry. Interest in buildings of this nature is being expressed everywhere, not only in the large urban communities of the United States, but in many of the high-grade suburban districts surrounding. The servant problem, the high cost of land and building construction, and many responsibilities are removed from the tenant of an apartment hotel. For this reason the application of this type of planning finds interest in high-grade suburbs as well as in the residential districts of cities and larger towns.

Because of the large number of points involved in the analysis of an apartment hotel project, it is impossible to cover all in detail, except through the system of reference charts which have been carefully prepared and will be found on pages 78 and 79. These charts have been designed primarily as reference data and a serious effort has been made to introduce practically every principal element or factor which should receive consideration when a building of this kind is being planned. It will be noted that the tabulations are classified and divided almost in the same manner as thought processes should be developed, and it is believed that if the hotel owner and his architect will check these suggestions carefully and apply the answers to each individual project, the result must be a considerable increase in planning efficiency

and avoidance of the danger of omitting some important consideration.

The first chart outlines a number of factors influencing the selection of the site for an apartment hotel. This is divided into a consideration of local conditions of the proposed site, physical conditions of the land, conditions which affect appraisals, underlying conditions of the rental market, and some miscellaneous suggestions. Certain of the points briefly indicated will bear further explanation, while others are self-explanatory. The local conditions outlined represent the general demand on the part of the type of tenants who might logically be expected to live in an apartment hotel; so the requirements listed under this heading call for community facilities and the physical characteristics of the neighborhood which will meet a clearly defined potential market. Under physical conditions, as indicated in the chart, experience has shown that the site should be chosen facing a park or a wide boulevard, or at least be a corner lot so that permanent light and air are assured. If such a location is not available, an extra lot should be purchased adjoining the building on each side and maintained with low buildings to provide light and air. The orientation to insure sunlight, proper ventilation and good exposures is highly important. Another viewpoint from which the site should be considered is that of the mortgage loaning interests, which will appreciate the location and proposed building and will make decisions in regard to financing in

Typical Investment, Income and Operating Cost Figures

An Apartment Hotel Without Sub-Rental Space

Description of Building

The total investment in this building is \$2,750,000. Size of plot 125x150 feet; height, 14 stories above curb. The cellar contains the usual space for mechanical equipment and service—no laundry and help accommodations other than locker rooms. The first floor contains apartments same as the typical floor. Grade allows for entrance below first floor and restaurant. There are no shops or stores. Each of the typical floors contains suites of one, two and three rooms. 17 suites have serving pantries; 4 suites have kitchenette and dining alcove. All suites have spacious closets. There are two types of three room suites (a) living room, two chambers, serving pantry and two baths and (b) living room, one chamber, dining alcove with kitchenette and one bath. One suite on each floor is without serving pantry. Living rooms average 13x22 feet; chambers, 12'x16'6"; dining alcoves 7x10 feet. Roof has no apartments.

SUB-DIVISION OF ANNUAL INCOME

Apartments

70 three-room apartments, 14 two-room apartments, 224 one-room apartments. Total 462 rooms, 376 baths. These rooms each bring an annual income of \$1350, and allowing 20% for vacancies, the annual room income is \$498,960.

Food Service

Restaurant leased. Annual income.....\$16,500

Miscellaneous

Telephones, cigars, newspapers, etc. Annual Income\$ 2,000
TOTAL ANNUAL INCOME.....\$517,460

ANNUAL OPERATING COSTS

Interest Charges

1st Mortgage \$100,000; Second Mortgage.....\$35,000

These are estimates for the first year only. Additional allowance must be made for amortization of mortgages amounting to approximate annual charges of 2½% to 4% of the first mortgage and 5% to 10% of the second mortgage. This amortization will automatically reduce the annual interest charges, unless the financing is arranged on a different basis. Sometimes the annual interest payment and the annual amortization is arranged so that when added together, the same amount is paid each year.

Taxes\$45,000

Payroll (including management, housekeeping and mechanical) 35,000

Restaurant (leased) 16,500

Maintenance and Depreciation..... 27,000

Insurance 9,000

Power Plant 15,000



South Shore Club Apartments

Chicago, Ill.

*McNally & Quinn,
Architects*

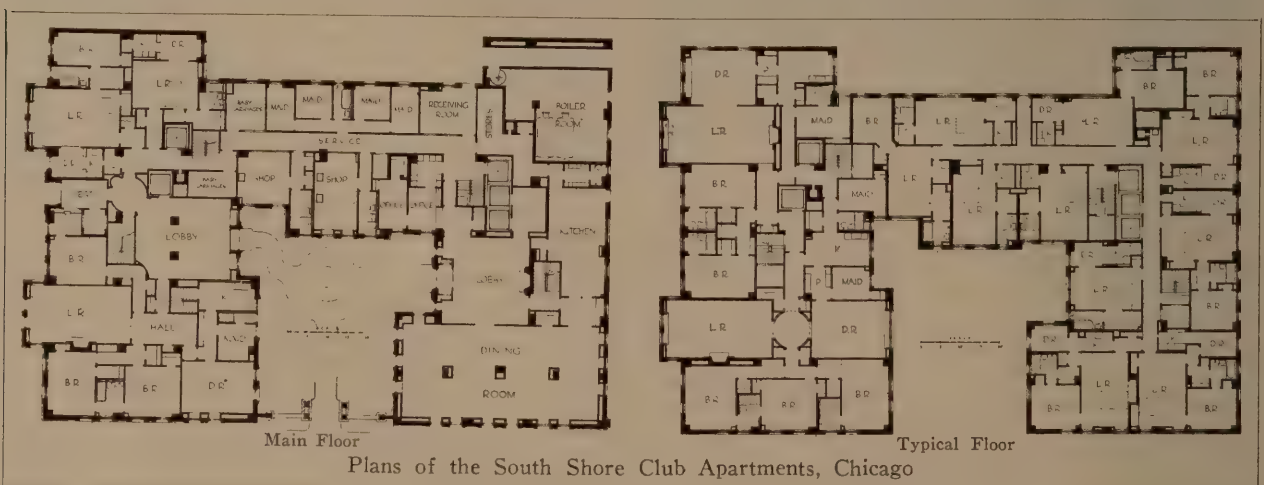
THIS interesting type of apartment hotel has been designed for occupancy by cooperative owners and by tenants on a regular rental basis. An examination of the first floor plan below will show that the hotel is arranged with regular restaurant service and also for food service into each apartment. Apartments are planned with service pantry and dining alcove units. The service pantries are equipped with range, sink and refrigerator. The large cooperative apartments have full kitchen equipment as shown in the left unit of the typical floor plan.

*The complete contract for the
Furnishings of the South
Shore Club Apartments was
executed by the PICK-
BARTH COMPANIES.*

accordance with their liking for the location and their belief in its future. It is perhaps needless to emphasize the importance of a most thorough analysis of the rental market. For a project of this nature, the demand should already be in existence, because pioneering in a torpid rental market is a long and expensive procedure. Local rentals or at least rentals in a similar district must justify the investment. The best opinion advises omitting retail stores and shops unless they are absolutely necessary to help carry the high overhead of expensive real estate. Tenants in the apartment hotel think of the building

as a home, and they are not favorably impressed with the intrusion of retail business, which generally destroys domestic character.

The restaurant offers an involved economic problem for which few apartment hotel owners have found a happy solution. A restaurant is a necessary detail, but in order to show any profit or even to pay its own way, it must draw outside patronage in some manner. Hence the development of tea rooms and coffee shops is usually desirable. In view of the fact that profits from the restaurant are sometimes questionable, this service should be analyzed carefully and





The Graemere, Chicago, Ill.

Walter W. Ahlschlager, Architect

Typical Floor Plan

THE Graemere is an apartment hotel containing 88 one-room suites with bath; 42 suites of two rooms with bath; 39 suites of three rooms with bath; and 16 suites of four rooms with bath, totaling in all 175 suites. The building is of structural steel and concrete floors with exterior of face brick and stone trim. The suites of two to four rooms are arranged with kitchenettes and dining-kitchen combinations.



Great importance is attached to the public rooms of a high class residential hotel. Those of The Graemere are most distinguished, and while very elaborately appointed, have an atmosphere of quiet and seclusion. They were designed and furnished by PICK-BARTH Interior Decorators.



A View in the Lobby

space and equipment selected and arranged for economy of space and in a way calculated to attract outside patronage. Other interesting details which should be carefully considered will be found indicated in the tabulation.

The second chart should be given primary consideration by the owner and his architect before the development of even the final sketch plans. In fact, an analysis of the project based on these points will indicate primary elements of planning which fit almost any apartment hotel project and which will provide a basis for tentative as well as finished layouts. In this chart will be found considerations for typical apartments; the possible requirements of food service, such as kitchen and restaurant space, service elevators, pantries in private kitchens; other forms of service for which space will be necessary; the possible requirements of public spaces and suggestions as to the types of occupancy which may be provided for sub-rental purposes. A number of miscellaneous considerations which directly affect planning will also be found in this tabulation.

Plan Elements Affecting Income

Other elements, particularly those of investment and income which naturally affect the development of plans and specifications, will be found in the third chart. Planning is unquestionably the key to rental appeal and profits. Specifications form the insurance policy against high maintenance and depreciation costs. Proper layouts and equipment will cut operating costs. Thus, the various points indicated in this chart should be analyzed from the viewpoint of making the project a profitable building, and a general budget can be developed which to a considerable degree will establish the amount of space and the amount of overhead cost which would be allowed under each division. Each apartment hotel project is a distinct problem. It is well known that no two are comparable, so the provision in these columns of actual income and expense figures on individual operations of this nature would be valueless and probably misleading. For that reason detailed suggestions are made in the various charts, and the sources of information are almost obvious. In fact, it is quite probable that the architect can obtain much additional information from the owner, who has undoubtedly given serious consideration and comprehensive study to the problem, and from other sources of information.

The fourth chart provides a detailed analysis of special equipment and features which may increase rentals in an apartment hotel because they appeal directly to prospective tenants. Certain of these features require incorporation in the plan, and for this reason they should receive early consideration. Therefore, this tabulation has been divided, first, into elements affecting the plan, then into factors of planning and equipment for living rooms, bedrooms, bathrooms and kitchenettes. Many of these factors are not only appreciated but required by apartment hotel tenants, as it is obvious that this method of living is luxurious to a degree only surpassed in finest private homes and large apartments. The tenant is ready to pay a high price for small space, provided that space constitutes an efficient and attractive home,

easy and pleasant to live in, with a large proportion of the normal domestic problems solved through ingenuity of planning, equipment and service. The service features are also indicated in this chart, together with a number of miscellaneous suggestions. Naturally, these charts cannot be all-inclusive, but a serious effort has been made to include at least the more important features.

A Suggested Planning Method

In developing the plans and specifications for a complex and important type of building such as an apartment hotel, there is a method which has recently come into vogue and can be highly recommended. This method involves the primary preparation of a comprehensive detailed report which fully describes the plan, construction and equipment of the building. The first step is to lay out a tabulation such as that accompanying this article, covering all the points which may occur to the owner or his architect or of which he may be told by the owner. These various subjects are correlated as in the charts presented here, and a full written description of the proposed building is prepared with suggestions as to how the various requirements should be made. To illustrate this preliminary report, rough floor layouts are indicated, with perhaps a few thumb-nail sketches of important details. The next step is to go over this report carefully with the architect and with the manager, who should be selected during the early stages of the planning, so that the benefit of his advice may be gained. If no manager has been selected, a consulting expert should be called in—an individual who has had practical experience in the apartment hotel field. As the various items are taken up point by point, the proposed solution of each problem is approved or amended, so that this final corrected report becomes an exact basis upon which to develop the first plans and the first draft of the specifications. In checking over the actual efficiency of this method, as opposed to the ordinary method of developing sketch plans and making tentative changes from time to time in a series of conferences, it has been found that the final approval plans and specifications can be arrived at in about one half the time usually required, and that moreover, a more efficient building is usually developed. It is a strange fact that the average prospective owner of a building is not able to visualize the finished result from an examination of plans unless he thoroughly understands a written description. The type of report to which these paragraphs refer virtually makes possible visualizing the entire building through a descriptive exposition which begins with the proposed entrance and public spaces and covers the full layout, and at least the general equipment for all floors, typical apartments and surfaces, and other essential details.

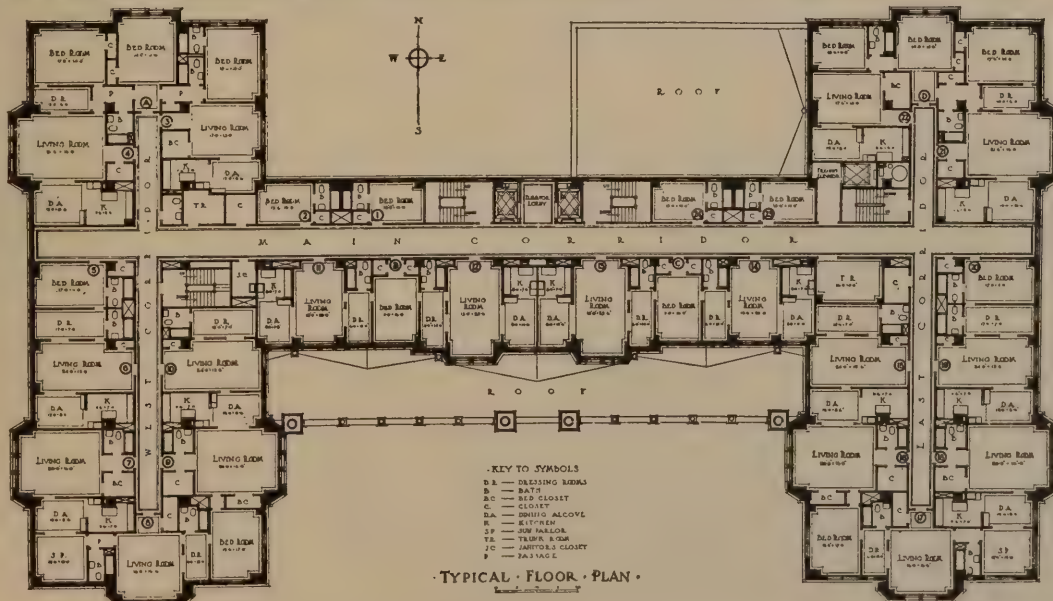
Because of their long experience with apartment hotel projects, the officials and technical staff of the PICK-BARTH Companies are in a position to render valuable services, both in connection with matters of general policy and by making preliminary estimates and plans for budgeting and financing purposes. Architects, owners and other interested parties who desire to take advantage of this consultation service are invited to do so without obligation.

Vernon Manor, Cincinnati, Ohio

Samuel Hannaford & Sons, Architects—Garber & Woodward, Associates

THIS apartment hotel was completed in Cincinnati in 1924 and contains approximately 160 suites which are flexible of arrangement. All have at least one bath and about 12 per cent have two baths. The building is of reinforced concrete skeleton frame with brick and cut stone exterior walls. The cost of construction was approximately 53 cents per cubic foot.

The Furnishings of the Vernon Manor were supplied by the PICK-BARTH Companies and the built-in space saving equipment by the affiliated organization, The "White" Door Bed Company.



Lincoln Park Manor,

Chicago, Ill.

Olsen & Urbain, Architects

THIS attractive apartment hotel has been planned in a very interesting manner for a lot of odd shaped perimeter. Because of the difficult site problem, the concentrated planning idea has been used throughout with door beds and other efficiency equipment giving double value to the space.

The complete contract for the Interior Decoration, Furnishings and Equipment of the Lincoln Park Manor was executed by the PICK-BARTH Companies. Door Beds and Space Saving Conveniences were installed by the affiliated organization, The "White" Door Bed Company.



The Lobby



The Lounge

The Planning and Construction of Apartment Hotels

In the preceding chapter a system of plan analysis has been outlined under which it is possible to develop for the new apartment hotel project a series of logical *plan units*. The architect's responsibility now is to fit these together almost in the manner of a picture puzzle, providing proper space inter-relationship and considering of course the basic plan requirements and limitations of perimeter, light, air and all local restrictions imposed by zoning laws or building codes.

Here we have established a collection of desired plan units—so many one, two, three or four room apartments with one or more baths and with or without housekeeping facilities, all in accordance with policy decisions already established. Then there are the units of space to be given over to the public, to food service, and to other forms of service and to sub-rentals.

The first activity of the architect should be the preparation of tentative plans for the basement and each floor of the building (usually the tentative floor plans include basement, first floor, second floor, and typical floor plans, or a series of typical floor plans where set-back regulations impose smaller floor areas as the building grows higher).

At this point there are two of the most important problems of the general plan wherein the long experience and highly developed service of the Pick-Barth Companies may prove invaluable to the architect and the owner. These are the problems of (1) food service planning and equipment and (2) space saving (efficiency) planning and equipment (see Page 304).

From these two points of view the plan require-

ments of the individual apartment hotel project must be reduced scientifically to plan units ample in size to render proper service, correctly related to gain efficient and economical operation, and still consuming the smallest possible net area compatible with proper service. The questions to be answered are impossible from the owner's unaided point of view and very difficult for the architect, necessitating an amazing amount of research work if the correct solution is to be attained.

Some of the detailed questions of the two basic problems of food service and efficiency planning, as they affect the tentative and final plans of the apartment hotel include the following:

What types of food service are most logical for this particular plan?

Will the restaurants cater also to the outside public?

How many square feet must be allotted to each restaurant space?

What type of food service will be provided for the apartments?

How large must be the kitchens and auxiliary food service spaces?

What plan provisions must be made for food service (service elevators, pantries, etc.)?

If housekeeping facilities are provided in the apartments shall there be kitchens or kitchenettes? What are the most feasible compact plans?

How can net square footage be saved by efficiency planning such as the use of door beds, specially fitted dressing closets, etc?

One has but to ponder a moment to realize how



Lobby, Arcady Apartments, Los Angeles, Cal.
Walker & Eisen, Architects

Functional Plan Analysis

(Typical for an Apartment Hotel)

THE tabulation below shows a practical method of developing a schedule of plan requirements before even tentative floor plans are drawn. This proceeding will save much loss of time and money in planning and in operation.

General Data

Building Height

Limited by zoning law to 150 feet, probably 13 stories.

Construction

Fireproof, steel skeleton, concrete floors, brick and stone.

Apartment Size Schedule

Number of apartments will be determined by plan but renting conditions call for rentable units divided approximately as follows: 1 room (20%); 2 room (40%); 3 room (30%); 4 room (10%).

Kitchenette (serving pantry)

Each apartment to have one such room, 35 sq. ft., ventilated, refrigeration, and equipped for electric warming, etc., for food service from hotel kitchen. Use built-in units including ice box, electric grill, china cabinets, etc.

One Room Units

Shall consist of living room 12x18 to 14x24 in dimensions; kitchenette; door bed of twin bed type with dressing room. (See Page 100); 2 closets; bath.

Two Room Units

Shall consist of two types (a) 80% of total number to have living room about 14 ft. x 20 ft. with door beds and dressing closet and library about 14 ft. x 16 ft. with door beds and d. r.; (b) living room with door beds and one real bedroom. All to have usual kitchenette, bath and ample closet room, bath between rooms with outside access.

Three Room Units

Average living room 12 ft. x 20 ft., library 15 ft. x 18 ft., bedroom 12 ft. x 15 ft. Shall consist of three types equally divided: (a) living room and library each with door beds and one real bedroom with bath, kitchenette, two baths; (b) living room without door beds, library with door beds, one bedroom, one bath; (c) living room with door beds, dining room, bedroom, 2 baths.

Four Room Units

Shall consist each of living room 14 ft. x 20 ft., library 15 ft. x 18 ft. with door beds, dining room 10 ft. x 14 ft., bedroom 12 ft. x 15 ft., 2 baths, kitchenette, etc.

Restaurants and Public Space

Foyer 20 ft. x 25 ft. and small lobby for elevators, front office, checkrooms, etc. Lounges, one large and one small.

Ballroom, small for private entertainment, also 2 private dining rooms.

Restaurant, general, seating 300; grill-room seating 150.

Kitchen and Commissary, as required for restaurant and room service.

Special Plan Requirements

Three passenger and 3 service elevators.

Roof Garden playground and children's play-room.

Four stores on F street side, 1,200 sq. ft. rentable space.

much time the individual owner or architect will be called upon to spend in analyzing the above questions. On the other hand a letter or telephone call will bring to bear on your problem all the years of intensive experience of the Pick-Barth Companies to develop a complete solution of these phases of the plan with complete detailed reports of the types and cost of the necessary equipment.

The problem of making proper provisions for food service in the apartment hotel is one which can be solved only by the most careful study of the local situation. As a rule at least part if not all of the apartments will have full or at least partial housekeeping facilities. The minimum provision is a service pantry equipped with grill or warming oven and refrigerator. Here the food brought from the central kitchen may be served and maintained at proper temperatures, beverages may be prepared and a limited amount of cooking is feasible. For many families this provision is ample, meeting in full their food service requirements. It is important to note that through the provision of artificial ventilation these service pantries can be arranged to use inside space in the plan. It is not necessary to have a window in this small room unless so dictated by local building regulations.

When more complete cooking facilities are required within the apartment the problem is completely solved by the modern kitchenette as described in detail on Pages 304 to 311. The research and engineering departments of the Pick-Barth Companies have spent years of careful study on the

solution of this problem. As a result there is now available a complete line of compact kitchenette equipment which in various combinations provides in a minimum of space all the necessary facilities for complete cooking and housekeeping. Some of these combinations of equipment are shown on Page 308.

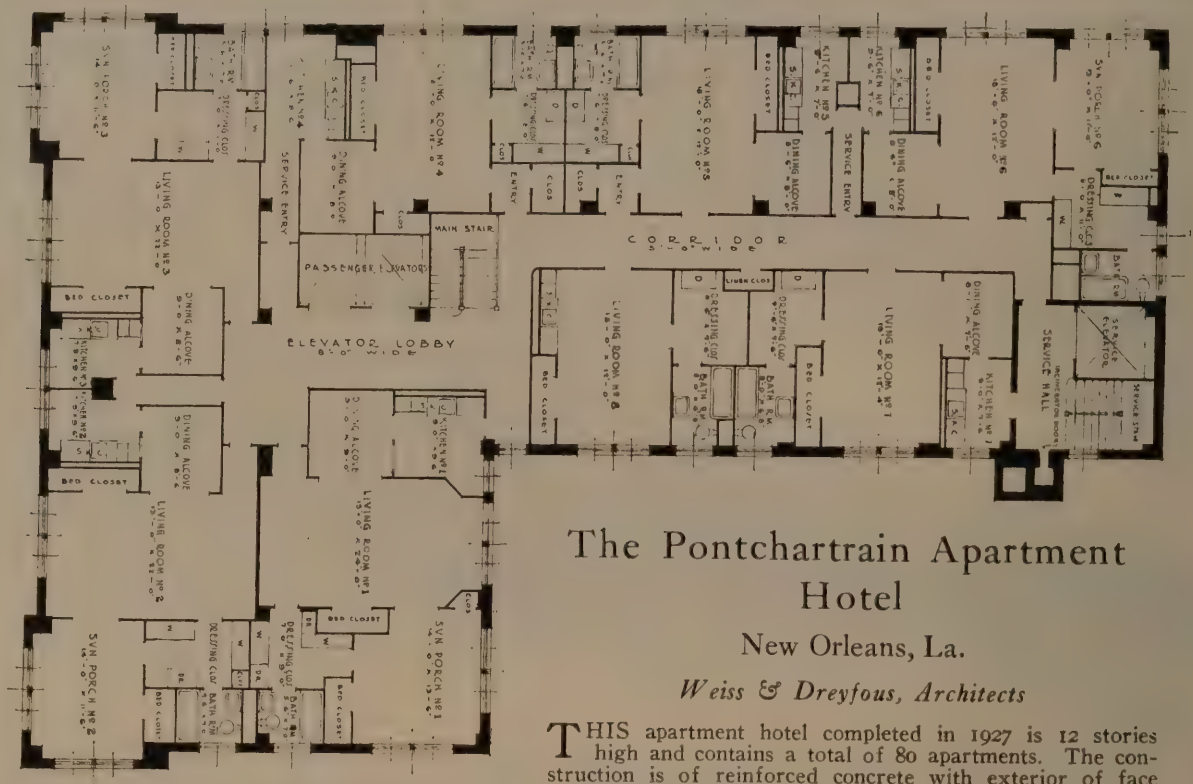
It is obvious that the correct planning of the apartment hotel involves the highest degree of space efficiency. To this end the compact kitchenette is a most important factor because a properly planned and equipped floor area of 35 to 50 square feet will have all of the efficiency and value of the average kitchen of from 63 to 140 square feet—a saving of thousands of dollars in the original building investment.

The subject of planning private kitchens for apartment hotels may therefore be summed up in the brief general statement that through the use of compact kitchen equipment at least one-half of the floor space ordinarily given over for this purpose may be saved!

The next consideration in planning and one having perhaps an even more important bearing on economy of first investment and of operation, is what has become known as "efficiency" or space saving planning. The objective in the apartment hotel is obvious—to provide the maximum of living comfort and domestic efficiency within the minimum square footage of floor area. The modern tenant in buildings of this kind *does not buy area*—he does not rent by the square foot! What he really pays rent for is a combination of factors which create for him a desirable place to live within the



The Attractive Lobby of the North Park Hotel, Chicago
Walter W. Ahlschlager, Architect



TYPICAL FLOOR PLAN

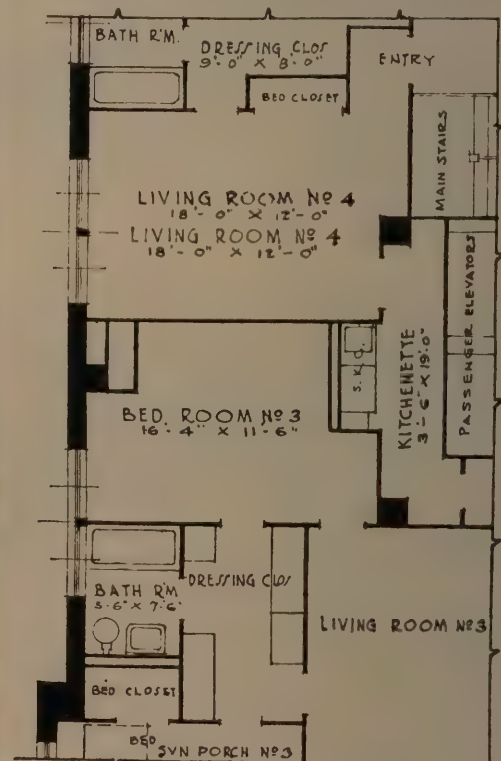
The Pontchartrain Apartment Hotel

New Orleans, La.

Weiss & Dreyfous, Architects

THIS apartment hotel completed in 1927 is 12 stories high and contains a total of 80 apartments. The construction is of reinforced concrete with exterior of face brick trimmed with stone. Interior partitions are of two inch metal lath and plaster.

The complete contract for Furnishings of the Hotel Pontchartrain was executed by the PICK-BARTH Companies.



PLAN OF TYPICAL UNITS

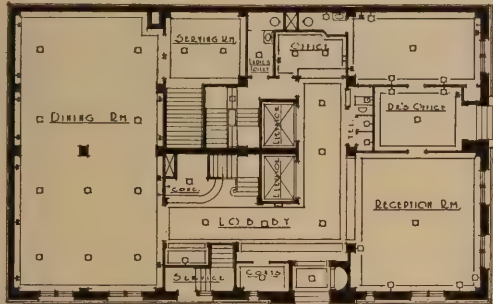
Typical apartment units shown above indicate the use of Door Beds with dressing closets and compactly arranged kitchenettes

70 Park Avenue New York (An Apartment Hotel)

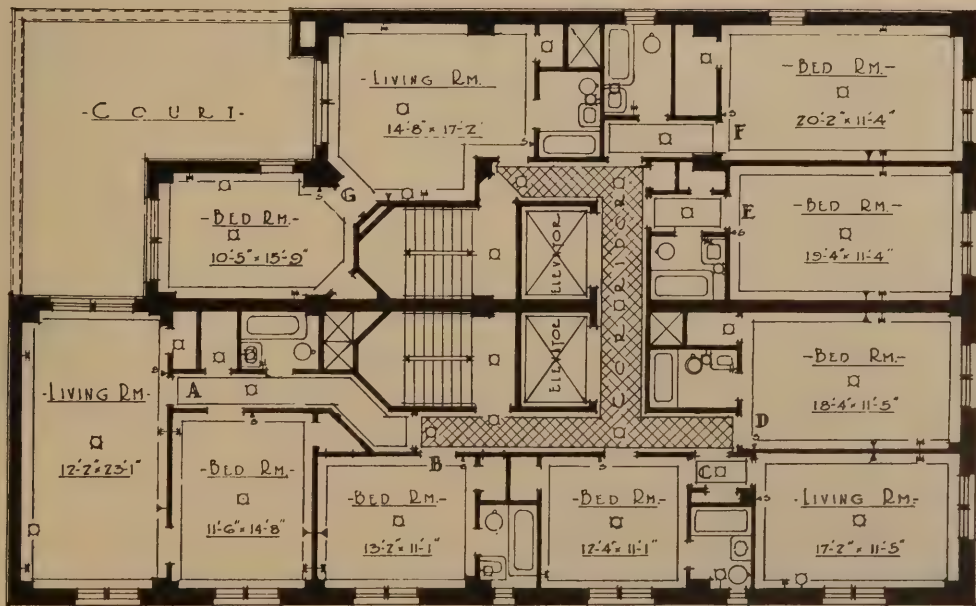
Geo. Keister, Architect

THIS apartment hotel is typical of many to be found in the high class New York metropolitan residential areas and is in radical contrast to the efficiency apartment arrangement. Its guest room suites are large and contain no facilities for kitchenette service.

The complete contract for the furnishings and equipment of 70 Park Avenue was executed by the PICK-BARTH Companies.



Main Floor Plan



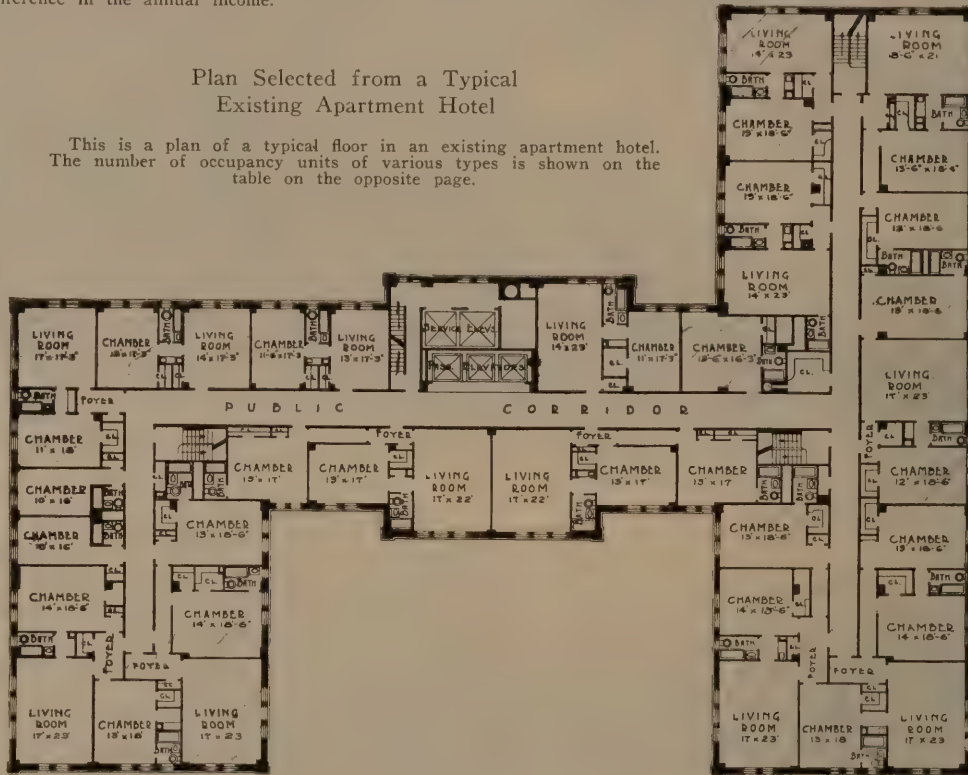
Typical Floor Plan

Efficiency Planning for an Apartment Hotel as Compared with the Usual Type of Plan

THERE will be found below an interesting comparison of the planning of apartment hotels under the ordinary and efficiency types of room layout. The upper plan has been taken literally from a well-known apartment hotel. The lower plan is based on the same perimeter but has been worked out by the Service Department of the "White" Door Bed Company under the efficiency method of planning. On the opposite page is shown an analysis of each of these plans indicating the number of apartments, the number of rooms and the difference in the annual income.

Plan Selected from a Typical Existing Apartment Hotel

This is a plan of a typical floor in an existing apartment hotel. The number of occupancy units of various types is shown on the table on the opposite page.



(See opposite page for detailed comparison)

The Same Perimeter Replanned Using Efficiency Kitchenette Layout

This plan has been developed using the same perimeter as that above but employing the efficiency method to provide more occupancy units as shown on the tabulation on the opposite page. This plan was prepared by the Service Department of the "White" Door Bed Company.



How Efficiency Planning May Increase Rentals From Same Area

The two tabulations given below represent an analysis of the two plans on the opposite page. The first is a typical floor in a non-housekeeping apartment hotel; the second is the same floor laid out under efficiency planning.

Naturally, under the efficiency plan there will be a greater number of occupancy units which will call for more mechanical equipment, partitions, etc., and also for the installation of efficiency equipment. An actual estimate by the "White" Door Bed Company indicates the additional cost per floor for efficiency equipment will be \$6,257. A general estimate of increased construction cost would indicate approximately \$13,500 per floor. The comparison of income in the tables below shows an annual amount of \$4,740 greater per floor in favor of the efficiency plan. As indicated by the figures just given, the efficiency type of floor plan would cost \$19,757 more per floor, exclusive of the furnishing costs, which are not materially different for the two plans. The increased annual income, however, shows a return of nearly 25 per cent on the increased investment.

Typical Floor of a Non-Housekeeping Apartment Hotel

Type of Apartment	No. of Apts.	No. of Rooms	Monthly Rental	Annual Rental
One chamber and bath.	3	3	3 @ \$ 60-\$180	\$2,160
Living room, one chamber, one bath.	3	6	3 @ \$100-\$300	\$3,600
Living room, one chamber, one bath, foyer.	3	6 (and 3 Foyers)	3 @ \$110-\$330	\$3,960
Living room, two chambers, two baths, foyer.	7	21 (and 7 Foyers)	7 @ \$170-\$1190	\$14,280
Living room, three chambers, two baths, foyer.	1	4 (and 1 Foyer)	1 @ \$210-\$210	\$2,520
TYPICAL FLOOR	17	40 (and 11 Foyers)	\$2210	\$26,520

Efficiency Plan in Same Perimeter

Type of Apartment	No. of Apts.	No. of Rooms (by function)	Monthly Rental	Annual Rental
Living room (double bed), dressing closet, dining alcove, kitchenette, chamber, one bath.	6	24 (and 4 Foyers)	6 @ \$150-\$900	\$10,800
Living room (twin beds), dressing closet, dining alcove, kitchenette, bath.	7	21	7 @ \$120-\$840	\$10,080
Living room (double bed), dining alcove, kitchen, bath.	4	16	4 @ \$100-\$400	\$4,800
Living room (double bed), kitchenette in closet, bath.	2	4	2 @ \$ 85-\$170	\$2,040
Living room (double bed), dressing closet, kitchenette, foyer, bath.	1	3 (and 1 Foyer)	1 @ \$ 95-\$95	\$1,140
Living room (double bed), dressing closet, kitchenette & bath, folding dining table in living room.	1	3	1 @ \$100-\$100	\$1,200
Living room (double bed), dressing closet, dining alcove, kitchen and bath.	1	4	1 @ \$100-\$100	\$1,200
TYPICAL FLOOR (Efficiency Plan)	22	75 (and 5 Foyers)	\$2605	\$31,260

amount of money which he can afford to pay. He buys location, appearance of the building, impression value, comfort, and particularly relief from the servant problem.

On the other hand, from the point of view of the owner (which is always that of the architect) the new building will cost almost equally per square foot of floor area regardless of the plan. Thus we immediately face this problem of efficiency planning—to get the greatest rental value possible out of each plan unit every square foot must be made to serve an important purpose or if possible a *double purpose*.

This leads immediately to a discussion of convertible purpose rooms as made feasible by the door

bed and other space saving conveniences as discussed on Pages 304 to 311. The use of door beds and compact dressing rooms in connection with living rooms, libraries, etc., doubles the purpose of this space and provides almost 40% increase in space efficiency, having the desired result of placing the investment on a very sound economic basis. Combinations involving this planning idea will give two room efficiency to one room apartments, and three or four room efficiency to two room apartments, providing guest rooms which can be carried at no additional cost and making possible the provision of very desirable apartment hotel units at reasonable rentals.

For the foregoing reasons a very large percentage

Examples Showing Relative Number of Various Sized Apartments Data From Six Successful Apartment Hotels

Size of Building	Total Apartments	1 Room and Bath	2 Rooms and Bath	3 Rooms and Bath	Over 3 Rooms
6 story and basement building 87 ft. x 110 ft.	74 36 with kitchens 38 without kitchens	14 4 with kitchens 10 without	50 22 with kitchens 28 without	10 with kitchens	NONE
14 story and basement (13 floors of apartments) Building 100 ft. x 135 ft.	195 All with serving pantries (kitchenettes)	78 with kitchenettes	91 with kitchenettes	26 with kitchenettes	NONE
*13 story and basement (12 floors of apartments) Building 110 ft. x 142 ft.	180 132 with kitchens 48 without kitchens	120 72 with kitchens 48 without	60 with kitchens	NONE	NONE
11 story and basement (9 floors of apartments) Building 90 ft. x 105 ft.	162 106 with kitchens 56 with kitchenettes	54 36 with kitchenettes 18 with kitchen (and dining room)	54 20 with kitchenettes 34 with kitchens	40 with kitchens	14 four rooms with kitchens
*6 story and basement Building 50 ft. x 100 ft.	52 19 with kitchenettes 19 with kitchens 14 without	40 15 with kitchenettes 15 with kitchens 10 without	12 4 with kitchenettes 4 with kitchens 4 without	NONE, but various combinations are made to provide 3 and 4 room apartments	
10 story and basement (9 floors of apartments) Building 86 ft. x 98 ft.	288	216 54 with kitchenettes 36 with kitchens 126 without	60 40 with kitchenettes 20 with kitchens	12 with kitchens	Arranged for combinations

*All living rooms have door beds and dressing closets.

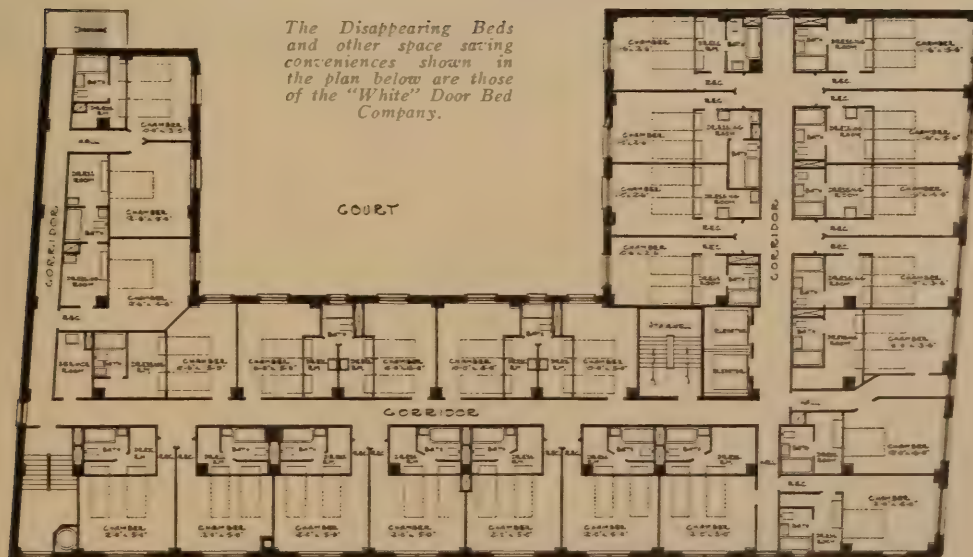
The Carlton Plaza Hotel

Detroit, Mich.

Louis Kamper, Architect

THIS apartment hotel has been specially designed for permanent and transient occupancy where the requirement is for limited but efficient space. The typical floor plan as shown below indicates an arrangement of one room and bath efficiency apartments and offers an excellent example of the method of greatly increasing the rental per square foot by the use of "White" door beds and space saving equipment. It will be noted that the average room is 11 or 12 by 14 or 15 feet and has been well planned with door beds, dressing closets and bath concentrated in a relatively small unit of space. This allows the use of the single room as a living room by day and a chamber by night.

The complete contract for the Interior Decoration, Furnishings and Equipment of the Carlton Plaza was executed by the PICK-BARTH Companies.

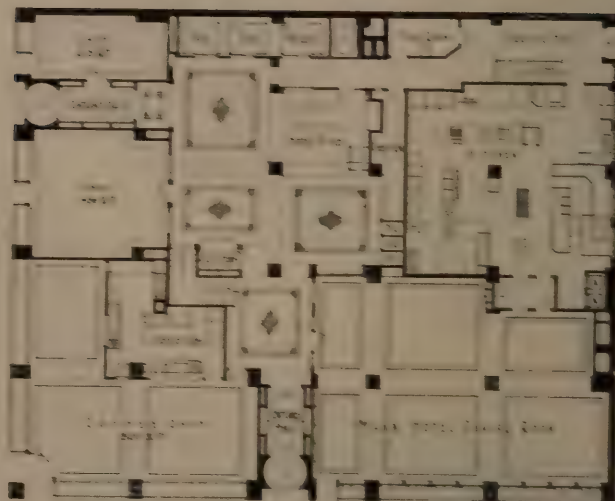


Typical Floor Plan of Carlton Plaza

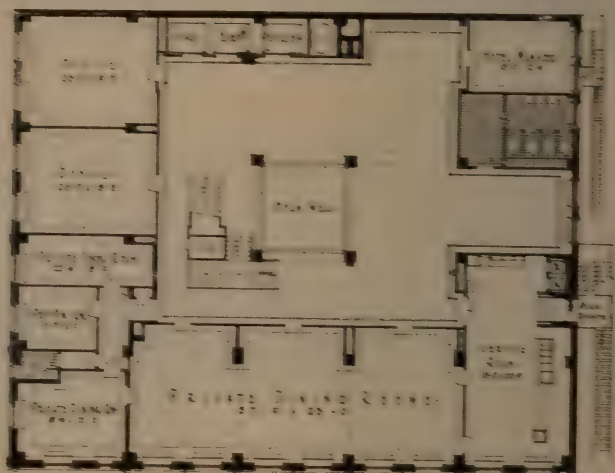
Hotel Maryland

Chicago, Ill.

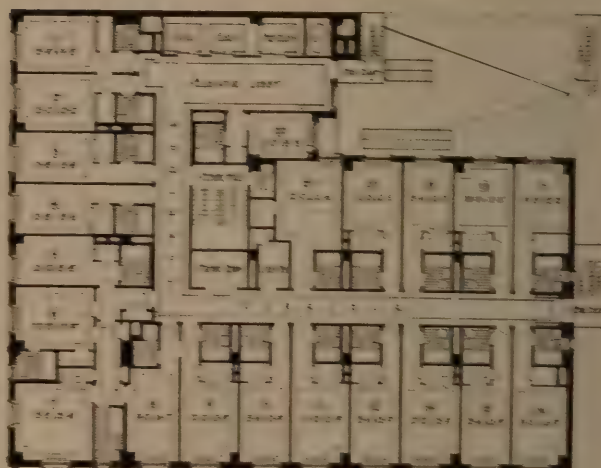
William Bernhard, Architect



Main Floor Plan



Mezzanine Floor Plan



Typical Floor Plan

THE Maryland was opened in November, 1927. The construction is of steel with concrete floors. Exterior walls are of pressed brick with hollow tile backing. The attractive exterior is designed in a simple, dignified manner using black granite for the first floor, blue Bedford stone trimmed with terra cotta for the second floor and the balance in brick with stone trim. This hotel contains 315 rooms, many of which are designed with disappearing door beds so that they may be used both as living rooms and as bedrooms, or may readily be arranged in suites of from two to five rooms.

The simplest interior for the Reception and Entrance of the Maryland was provided by the FICK-BARTHO Company.



A Corner in the Magnificent New Ritz Towers, New York
Emery Roth, Architect

of the apartment hotels which are proven successes are fully or partially planned under the "efficiency" system.

At this point it may be well to introduce a brief explanation of the New York apartment hotel situation which in one sense has been artificially stimulated and perhaps overdeveloped because of peculiar local building regulations. New York regulations bring all straight apartment buildings under the tenement house laws. The requirements for fire escapes in large apartment buildings approximate one smoke tower (interior firesafe stairway) for each two families. Thus a large apartment building cut into small apartments is impractical because so much of the area would be taken up by the fire escape shafts as to render such planning impractical for high buildings. On the other hand, if food

service is included, the building is classed as a hotel and does not come under the drastic restrictions of the present tenement house laws. High land values are present in all logical locations for such buildings and by planning an apartment hotel the structure will have at least 30% greater efficiency of rentable area than a straight apartment building of the same perimeter. This situation has resulted in the building of a large number of apartment hotels on the theory that light housekeeping might be conducted through the medium of the "serving pantries." The bitterly disputed question at the time of this writing is whether or not cooking in these apartments is lawful. If it is these buildings meet a long-felt want as evidenced by their popularity and success—if not, there will be many failures in this class of project until the tenement house laws

Typical Units of Efficiency Planning

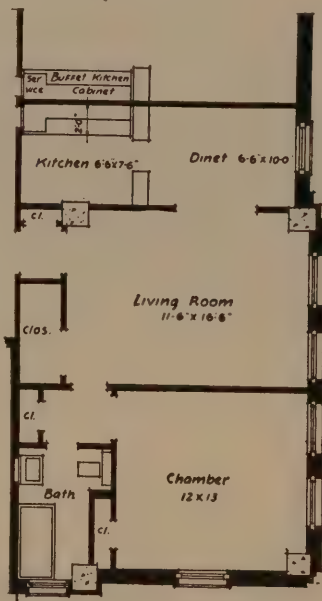
ON this and the opposite page there are presented a number of typical plan units selected from various successful apartment hotels. These units represent what is known as "efficiency planning"—the use of Door Beds and other Built-In Equipment, so that at least one room may be used as a bedroom at night and for other purposes during the daytime. This type of planning means that an apartment may be laid out with all the utility value of a much larger unit. From the

viewpoint of the owner it is possible to obtain more rent per square foot for this type of space than any other type. From the tenant's viewpoint, it is possible to buy more space service for a given amount of rent than in buildings containing apartments of single utility layouts. It is believed that the variation of plans presented here will cover a number of suggestions for prospective buildings of various types.



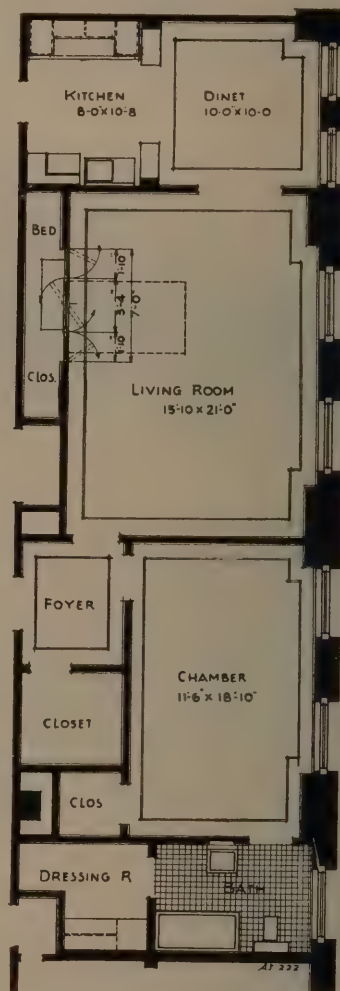
THREE ROOM EFFICIENCY APARTMENT

THIS is a typical apartment from the Georgian Apartments, Evanston, Illinois, Albert S. Hecht, Architect. Note the use of Concealed Beds and the dressing room with built-in Dressing Table and Cabinet. This three room apartment has actually the facilities of two bedrooms, although floor space is required for only one.



ANOTHER TYPE OF 3 ROOM EFFICIENCY

THE plan shown at the left is an apartment in the Majestic Hotel, Hot Springs, Arkansas, Sanders and Ginocchio, Architects. This is another compact apartment, containing a chamber and living room with a small complete kitchen equipped with a built-in Buffet Cabinet.

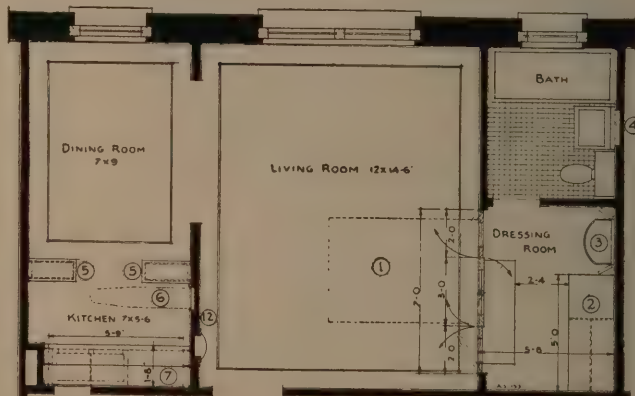


AN EFFICIENT PLAN HAVING LARGE ROOMS

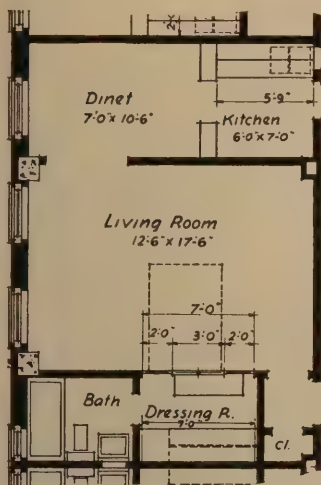
THE above plan shows a layout with built-in Space-Saving conveniences in the apartment building at 900 Michigan Avenue North, Chicago, Illinois, Jarvis Hunt, Architect. This provides a luxurious layout with the living room serving by day and night, or as a guest room. The kitchen, though relatively small, is completely equipped by a compact arrangement of Space-Saving Kitchen Cabinets.

TWO ROOM EFFICIENCY PLAN

AT the right is shown a suggested plan for the layout of a small apartment unit where the living room serves as a bedroom at night through the use of a Door Bed. The closet behind the bed forms a dressing room containing a built-in Dressing Table and a Dressing Cabinet. The kitchen is completely equipped for service with a built-in Buffet Kitchen Cabinet with range, refrigerator and sink, built-in Ironing Board and China Cabinets. The built-in Telephone Niche is an added convenience.



See Pages 304 to 311 for further details concerning Disappearing Beds and Space Saving Conveniences.

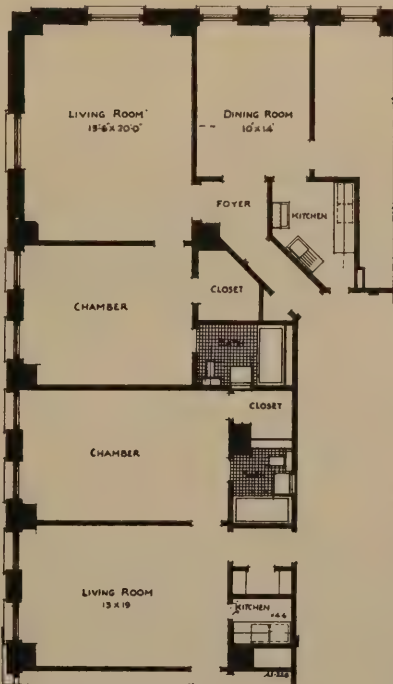


One Room, Dinnet and Kitchen

THE plan shown at the left is typical of the units in the Acropolis Apartments, East Orange, New Jersey, Nathan Harris, Architect. This is a two room suite with a built-in Buffet Kitchen Cabinet and a Door Bed representing a 60 per cent increase in space efficiency.

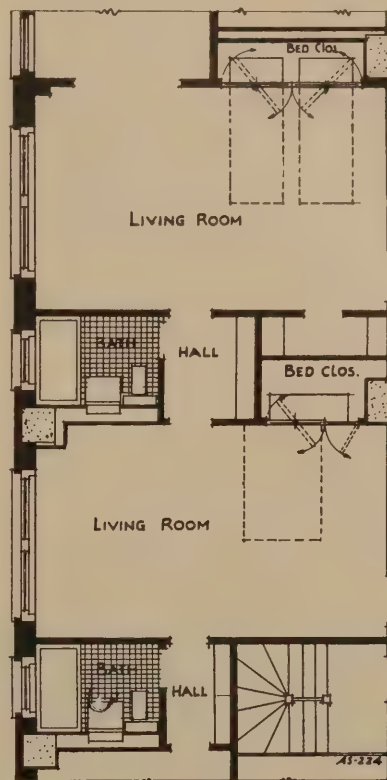
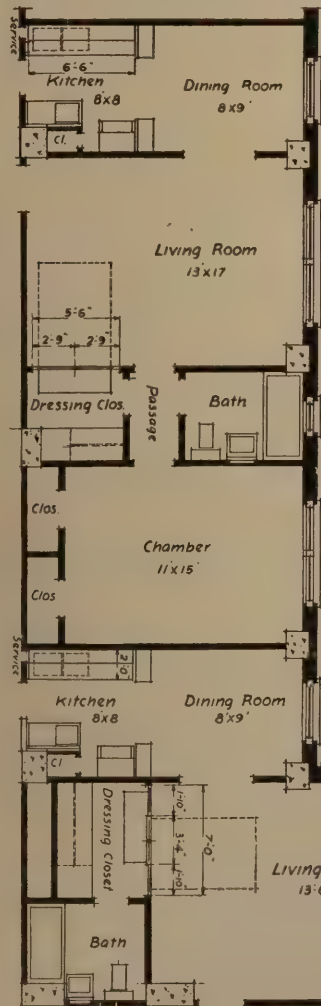
Buffet Kitchens

BELOW is shown the plan of two apartment units in the Ambassador East Hotel, Chicago, Robert S. De Golyer, Architect. These represent apartments where very small space is devoted to cooking facilities. The space saving here is made possible by the use of built-in Buffet and Kitchen Cabinets which provide kitchen facilities in a minimum area.



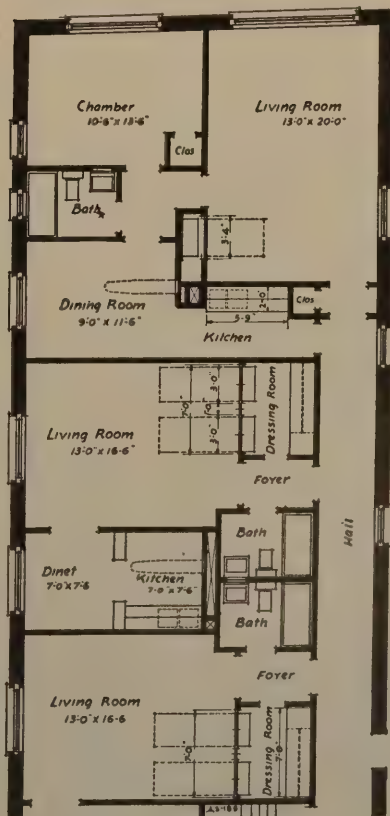
Dressing Rooms With Cabinets

THE plan below shows typical apartment units in the Overbrook Arms, Philadelphia, Pa., Lippincott & Schaefer, Architects. Compact kitchen and dining room layouts are made possible by the use of Space Saving Conveniences and Door Beds, and built-in dressing cabinets provide the double utility factor for the living rooms.



One Room—No Kitchen

THE above plan is typical of the Park Lane Apartments, Chicago, Lowenberg & Lowenberg, Architects. This is a one room unit without kitchen facilities, but providing a living room and a bedroom by night through the use of Door Beds.



Extra Bedrooms in Reduced Areas

THE plan at the right shows typical units of the plan of the Schenley Arms, Pittsburgh, Edward J. Crump, Jr., and Wm. L. McQuillan, Architects. Here the compact kitchenettes are made up of a built-in Buffet Cabinet, which includes kitchen cabinet, refrigerator, sink and range in one unit. Door Beds of the twin bed type are introduced. The dressing rooms are equipped with built-in Dressing Cabinets.

Examples of Apartment Hotel Construction Costs

The following examples of construction costs have been selected to indicate the variation in different building types and localities. They are taken from actual operations.

Description of Building	Total Cost	Cost Per Cu. Ft.	Cost Per Room (with proportionate bath)
1. Michigan, 1925. 12 story and basement, reinforced concrete, brick walls, concrete floors. 396 rooms and 135 bathrooms arranged in 1, 2, 3, 4, 5 and 6 room suites.	\$1,680,000	97c	\$5,252
2. Pennsylvania, 1926. 20 story and basement. Steel and concrete, brick walls and concrete floors. 640 rooms and 327 bathrooms arranged in suites of 1 to 4 rooms and kitchen.	\$2,560,000	75c	\$4,000
3. Ohio, 1925. 7 story and basement, reinforced concrete, brick walls, concrete floors. 250 rooms and 104 bathrooms. Forty 1 room apartments, balance 2 or 3 rooms.	\$1,000,000	53c	\$4,000
4. Illinois. 12 story and basement, reinforced concrete, with walls of brick on tile, concrete floors. 310 rooms and 280 bathrooms, single room apartments and 30 two or three rooms.	\$1,085,000	60c	\$3,500
5. California, 1926. 14 story and basement, reinforced concrete, brick walls, concrete floors. 426 rooms and 167 bathrooms, apartments each have kitchen-dining alcove.	\$1,207,000	65c	\$2,835

are drastically changed in view of the great advance in firesafe construction since they were drafted.

For the above reason, and in view of New York's zoning law which is discussed in the following chapter, the plans of New York apartment hotels must be analyzed differently than those in any other part of the country.

Thus far this discussion of the planning of apartment hotels has covered primarily suggestions in relation to efficiency of plan and equipment. It has been indicated that within greatly reduced areas, as compared with ordinary planning methods, comfortable and even luxurious living quarters may be provided for tenants on a rental basis which makes such projects very attractive from an investment viewpoint.

There remain now to be considered the questions of general kitchen and restaurant provisions and that of public space. In both considerations it is of course desirable to restrict this space to a reasonable minimum, but in so doing great care must be exercised that such restriction be not overdone. (The scientific allotment of kitchen, restaurant and their auxiliary spaces is presented in detail in the chapters beginning on page 313.) Therefore of prime importance is the decision as to probable required capacity of each. The kitchen will be required perhaps to provide several types of food service: direct service of cooked food to the various apartments; food for the restaurant; and perhaps also tea-room or cafeteria service. All of this must be decided and anticipated when the kitchen planning is under way, or at least space should be left for later expansion. Two service elevators should be installed where there is usually but one, this because of the service demand at meal hours.

In gauging the capacity of restaurant and kitchen

the possibilities of transient food service must be analyzed. Outside patronage of the restaurant is usually highly desirable for a number of obvious reasons and can usually be had because of the logical central locations of most apartment hotels. Here again the wisest precaution is perhaps to provide space for expansion, using it meanwhile as additional public space or temporary sub-rental space.

Public space should not be restricted too greatly in buildings of this type. After all, this building is to be the home of many families who must depend partially on the public space and restaurant for such entertaining as they may choose to do. The public rooms should not be very large but rather intimate in character. Two or three smaller rooms, affording partial privacy, are better than one large room. Lobbies may be very small as the front office requirements are at a minimum in this type of building. There should be at least one or two private dining rooms with proper reception facilities for entertaining.

From this point on the provision of general and community facilities for tenants becomes a matter of choice. In some apartment hotels there are children's playrooms, swimming pools, gymnasiums, roof gardens and other attractive features presented as inducements. No advice can be given on these except to make certain that they are really valuable adjuncts to the business success of the venture.

We may now approach the somewhat precarious subject of sub-rental space and its provision in the apartment hotel. As a general rule it should be eliminated from the plan except in very large buildings where the character and number of tenants warrants two or three shops; or in buildings located where the land cost is so high that high-priced sub-rental space is necessary to help carry the building.



Living room by day, with beds concealed



Living room at night, with beds open



Fenway Hall, Cleveland, Ohio

George B. Post & Sons, Architects

THIS is a 13 story apartment hotel of steel and concrete construction. Suites are of one, two and three room combinations, all with disappearing beds and dressing rooms, providing a two purpose efficiency layout as illustrated above. Compact kitchenette and kitchen-dining room combinations are used as shown.

The complete contract for the Interior Decoration, Furnishings and Equipment of Fenway Hall was executed by the PICK-BARTH Companies.



The Lobby



Typical Floor Plan

In such cases, if the building has two or more street façades good planning procedure usually places the main entrance façade on the less valuable frontage, with no stores or shops appearing on this façade. The reason is obvious—again we face the home instinct which except in exceedingly cosmopolitan districts always desires to submerge commercialism and create a high-class residential atmosphere.

Accompanying this section on apartment hotels there will be found a complete tabulation of the more important points to be considered in relation to the planning and general development of the apartment hotel project. Here again the development of a preliminary plan analysis will be found highly important, in fact invaluable as a safeguard against wasteful and unbusinesslike planning. The functional plan is the only real means of safeguarding the investment.

On the subject of construction of buildings of this type volumes could be written but there are a few fundamentals which must not be overlooked. Here are structures which are built primarily as investments, not as speculative projects for resale. These buildings are to be operated for many years as the housing of important businesses.

Apartment hotels must be built of the best possible materials, using nothing but the best of mechanical equipment.

While it is true that a somewhat greater original investment may be required by quality it will be found that this is immediately offset by efficiency planning and by minimizing maintenance and depreciation costs. If such a building is of average or cheap construction its costs must be written off in

the first 30 years or less. If it is really well built the depreciation can be taken over a period of 50 or more years.

Again, the value of quality will be realized in the maintenance of better renting conditions over a longer period of years because quality resists the signs of obsolescence and insures better recognition in the competitive rental market. Interior details, finishes, decoration and furniture are discussed in other sections of this book but the same safeguard of quality should be thrown around all parts of the original investment. General information on construction already presented in the section on commercial hotels finds application here.

As a rule the construction cost of the apartment hotel is higher than that of the commercial hotels because the buildings are more luxurious in character and the plans are not of such a repetitious character. Because of the housing of family life, with pianos, radios and concurrent noises, walls and floors should be thoroughly sound-proofed at least between apartments and in the plans living rooms should be placed to act as sound screens for bedrooms wherever possible so that late entertaining will not cause direct disturbance of those who may have retired in the next apartment.

An accompanying tabulation shows typical costs of recent apartment hotel building presenting a range depending upon the degree of elaboration in the architectural design and the functional requirements of mechanical equipment. Other tabulations herewith present comparative details which are probably sufficient as guides for general cost estimates.

Examples of Apartment Hotel Furnishing and Equipment Costs

Location of Hotel	No. of Rooms	Cost of Furnishings	Cost per Room	Cost of Food Service	Total Cost
Illinois	450	\$192,118	\$426.92	None	\$192,118
Michigan	374	\$136,616	\$365.26	None	\$136,616
Michigan	370	\$253,624	\$684.22	\$20,462	\$274,086
Illinois	340	\$135,846	\$399.55	\$14,061	\$148,907
Illinois	315	\$117,189	\$419.33	\$15,000	\$132,189
Illinois	240	\$ 70,077	\$292.00	\$ 1,623	\$ 71,700
Illinois	176	\$ 44,253	\$251.42	None	\$ 44,253
Texas	170	\$ 88,775	\$522.20	\$8,834	\$ 97,609
Illinois	161	\$ 88,158	\$547.56	None	\$ 88,158
Illinois	150	\$ 37,793	\$251.81	None	\$ 37,793
Illinois	148	\$ 41,987	\$283.69	None	\$ 41,987
Illinois	142	\$ 28,782	\$202.69	None	\$ 28,782
Illinois	132	\$ 32,684	\$247.60	None	\$ 32,684
• Illinois	112	\$ 24,776	\$221.21	None	\$ 24,776

Representative Installations of Disappearing Beds

THE illustrations presented on this page provide a graphic description of various types of Disappearing Beds. These are examples of efficiency or double-purpose planning in which, by the use of Concealed Beds, the same room can serve as a bedroom at night and as a living room by day. Various typical efficiency plan units are shown on pages 100 and 101. The first four views show the use of beds mounted upon doors, permitting the use of the bed closet as a dressing room, a very desirable feature. The lower two illustrations show the recess type of installation, which requires less space. The Roller Bed, another important and useful type is shown among the illustrations in Chapter XVII.



Views from the Concourse Plaza, New York, showing twin Door Beds. Note the perfect concealment achieved by the use of doors treated to match the wall panelling.



Views of a full sized Door Bed in the Georgian Apartments, Evanston, Ill. These show the use of the bed closet as a dressing room, access to which may be had whether the bed is concealed or down in the room.



Views of a bed installation of the "recess" type, in the Georgian Apartments, Evanston, Ill.



Park Lane Villa—One of Cleveland's Leading Apartment Hotels
Reynold H. Hinsdale, Architect

The Architecture of Apartment Hotels

The architectural treatment of apartment hotels is a problem which must be approached from a somewhat different point of view from that which would prevail in developing designs for commercial or resort hotel structures. The apartment hotel is in the nature of a home to its tenants and yet must possess something of the character, dignity and distinction of the highest type of institutional buildings. It must combine the hospitality of a real home with a measure of quality and even grandeur which characterizes the city residences of wealthy people.

The apartment hotel represents a completely new method of housing in this country. It is not a visionary novelty in the way of living that requires the selling of a new idea for its success, but it represents a practical solution for a distinct domestic problem which has arisen in this country within the last decade or so. The appearance of apartment hotels in the larger American communities and in the suburb of the more important cities is probably due to two primary reasons. The first factor is the servant problem which has created difficult, even impossible conditions for families heretofore accustomed to maintaining domestic establishments of some magnitude. The burden of retaining a force of servants properly trained to their duties is one which many families are now seeking to avoid, at least during the winter months when they come to the cities for the busy social season. The apartment hotel provides the requisite high class environment and convenience and at the same time relieves these families of a large part of their domestic responsibilities.

Another factor contributing to the existence and popularity of the apartment hotel is the present favorable combination of increased living standards and increased wealth sufficient to pay for the corollary luxury. An extended period of prosperity has created a fairly large group of citizens whose high salary or large profits in business ventures has equipped them to maintain a mode of living more expensive and more luxurious than has heretofore been customary except among the country's few families of long-standing wealth. This trend of housing standards and requirements has been for some time constantly upward throughout all stratas of society. There has been a definite trend toward better homes and better apartments with a constant increase in the practical and aesthetic demands of home owners and tenants. Many families enjoying good incomes do not desire to live in a large dwelling of usual plan and appearance but prefer to live in a more comfortable and efficiently arranged space conveniently equipped for the ordinary needs of existence, offering at the same time a decorative character approaching luxury and requiring the minimum of labor for its maintenance. The apartment hotel has met the need of many families of this type who have found through tenancy in such structures complete freedom from the responsibility

of operating equally satisfactory private dwellings of their own. Among the younger generation of well-to-do families there are many who have neither the experience nor the willingness to manage a house offering appointments as complete and convenient as those offered in the modern apartment hotel.

Another factor which has had a great influence in the acceptance of apartment hotels is the matter of land cost. The initial investment required to own land in the socially desirable sections of America's great cities has been mounting so rapidly as to prohibit, except to very wealthy people, the ownership of a private dwelling in these areas. It has been necessary to spread this high land cost among many families through the medium of tall buildings.

The apartment hotel differs from both the cooperative apartment and the high grade transient hotel in several respects. It lacks the housekeeping facilities or at least housekeeping facilities on any very great scale which are generally to be found in cooperative apartments. The apartment hotel often contains no kitchen equipment, the tenants depending for their meals entirely upon dining facilities operated by the hotel.

The average transient hotel does not offer the combination of rooms in suites that is to be found in the apartment hotel layout, hence the latter type of building offers more of the atmosphere of the home.

The apartment hotel idea is yet in its infancy and it is probable that it will see a more rapid development than any type of housing that has been introduced in this country. It is not only taking hold in American cities and suburbs but it has found great favor in some of the larger Continental cities where economic and social conditions closely parallel those of America.

With this background, it is apparent that the architectural appearance of apartment hotel buildings must possess certain qualities which distinguish them from the ordinary hotel or the average apartment building. It is obvious that the average structure of this type will be situated in a high class residential environment within a city. There may be a few erected in suburban areas but apartment hotels are primarily for the solution of the city housing problem. In fact, if the apartment hotel maintains restaurant service, the restaurant is very often dependent upon outside patronage as well as the patronage of the tenants for its successful operation, a consideration which makes the operation of an apartment hotel with restaurant service a difficult problem in suburban areas.

Too much importance cannot be placed upon the architectural appearance of apartment hotels. It is one of the prime essentials of a desirable home for the class of people to which this type of building caters. Nothing can more surely result in the failure of an apartment hotel enterprise than a poorly designed exterior and poorly appointed public spaces and private rooms. To a greater extent



The Warwick, Philadelphia, Pa.
Hahn & Baylinson, Architects

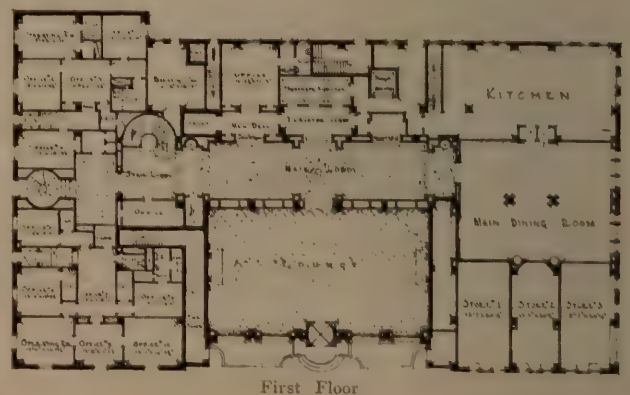
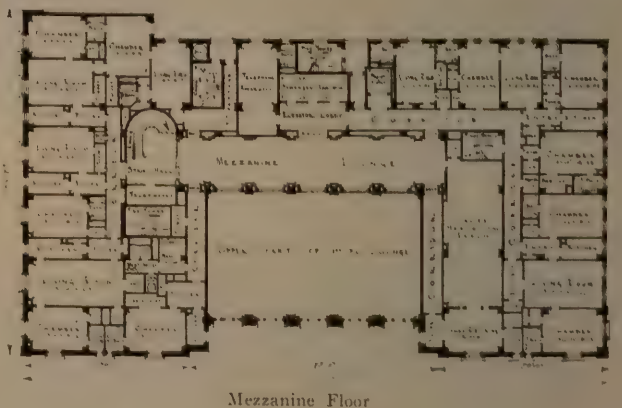
than is possible in almost any of the hotel buildings, with the possible exception of the better grade resort hotels, the architect must be given free sway to develop a design of great character and beauty in order that the building may create a favorable impression on prospective tenants.

As indicated above, the apartment hotel combines the functions of the home with the conveniences of the better class of transient hotels and its architecture must express this character of hospitality and home comfort in a large degree. It is a problem of no easy solution to create an exterior having the massiveness of the average apartment hotel structure which will nevertheless express the qualities which are desired in a residence to be occupied during the greater part of the year. Necessarily the treatment will have to be of formal character—such buildings cannot adopt the varied styles derived from ordinary residential architecture of older days, but must look for its inspiration to the monumental buildings that were the expression of great

wealth and power and were the culmination of architecture in its various periods of development.

There is no scarcity for good precedents for such structures, for in every age there have been erected fine buildings in styles that may be appropriately adapted to the modern apartment hotel.

The bulk and massiveness of early medieval castles must be rejected as a motif for modern buildings, because it is only false architecture to attempt to reproduce in steel and brick or stone the solid buttressed walls and turrets which are associated with these ancient fortified buildings. With the beginning of the Renaissance period, however, the old castles began to take on a character of openness and hospitality which permitted lighter and more graceful construction and which established for us beautiful designs quite in feeling with our present day requirements. In France during the height of the Renaissance period many fine palaces and chateaux were created of which Versailles is undoubtedly the most popularly known example. From these may be derived suggestions for architectural



treatment suitable to the more ornate type of apartment building. The French period is a little too fussy and elaborate for direct utilization in apartment hotel architecture, but the spirit of these buildings may very well be caught and the details adapted to present day needs.

In England the great Renaissance architects, including Sir Christopher Wren, Inigo Jones, and others, created buildings of such simplicity and dignity that their style may be quite readily used for the very finest modern hotel buildings. In this country the Colonial architecture developed from the Georgian period in England is characterized by still further restraint and for that reason is particularly satisfactory as a basis for the development of simple dignified exteriors for large or small apartment hotel buildings.

There are a few other pure styles that are really appropriate to buildings of this type. Mediterranean architecture may serve as an inspiration for apartment hotel buildings in the warmer climates of California and Florida, but when Italian villa architecture, for example, is extended vertically in mass and scale to meet the requirements of a large apartment hotel it loses much of its original character and becomes freakish in its effect unless handled with exceeding skill.

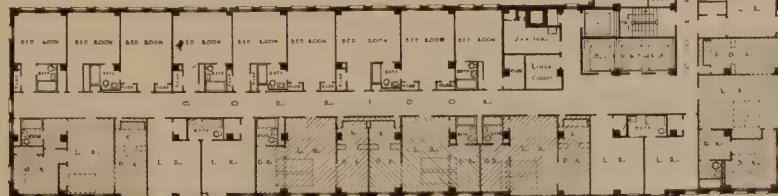


Exterior of Sanger Apartments, Dallas, Texas

There has been a very definite trend in the architecture of city buildings toward a greater simplicity and severity that was characteristic of urban buildings of a few decades ago. This is due largely to the fact that these buildings are seldom seen en masse, the average view being confined to the lower

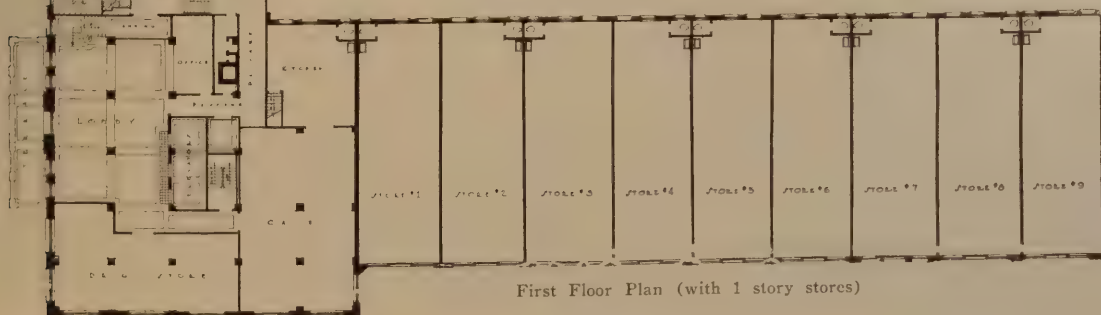
Sanger Apartments, Dallas, Texas

Lang & Witchell, Architects



Typical Floor Plan

The Door Beds and Space Saving Conveniences in the Sanger Apartments were supplied by the "White" Door Bed Company (affiliated with the PICK-BARTH Companies).



First Floor Plan (with 1 story stores)



Hotel McCormick

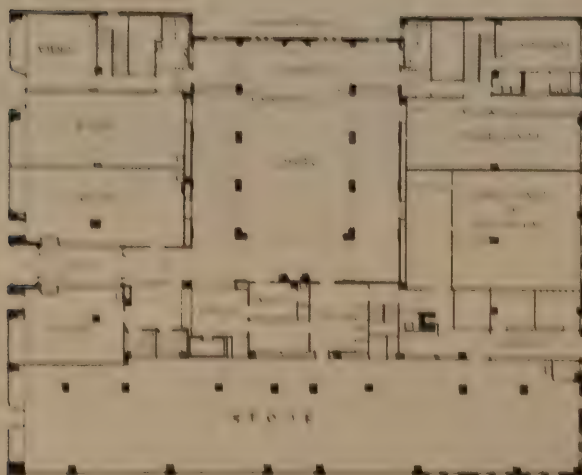
Chicago, Ill.

Edmund J. Meles, Architect

THE Hotel McCormick is arranged with 200 standard hotel sleeping rooms and 300 kitchenette apartments of one, two and three rooms. Every kitchenette apartment is equipped with electric refrigeration and modern cooking facilities. The door beds with dressing closets are installed so that living rooms may serve the double night and day purpose. Some of the apartments are equipped with dining alcoves directly off the kitchenette.

This building is designed with attractive public rooms, including an interesting grand lobby in Old English style. The purpose of this hotel is to provide a residential hotel within five minutes' walk of the business district (the loop).

The Architectural Company, Inc., the Interior Decoration and Furnishings of the Hotel McCormick was executed by the PICK-BARTH Companies.



First Floor Plan

THE typical floor plan shown at the right provides a flexible arrangement of compact apartments. While these apartments are small units, they are so efficiently planned with space saving equipment, that they provide the full facilities of an apartment of much larger size if they had been planned under the old system of "a room for every purpose".



Typical Floor Plan

floors and the details around the entrances and in an occasional glimpse of the roof line viewed from a considerable distance. Much of the space between the lower floors and the roof is therefore designed with extreme simplicity, as a saving both in expense and in architectural character. A style requiring ornate treatment over an entire facade of such proportions would be tiresome in the extreme. It is far better to adopt a simple, dignified treatment and to concentrate the ornamental detail at the entrances and perhaps in the lower portions of the building with a repetition of the motif as a crowning element to the top.

As to materials, the apartment hotel requires, above all things, the use of only the finer substances. Real stone and the finer grades of face brick predominate. Ornamental details of carved stone or terra cotta are appropriately used for window trim, belt courses and other decorative elements and grace and lightness are often contributed by fine wrought iron or bronze work.

There are a number of elements of the architectural ensemble which merit special consideration both with respect to their design and the quality of material employed. In other parts of this section it has been pointed out that there is a distinct preference for mounting steps or porches as a central space in apartment hotel structures, unless land values are so excessively high that they are absolutely necessary to pay ground rent. There may be an occasional step subordinated in its attention value in

the architectural scheme, but there should be nothing in the apartment hotel presenting the rows of steps which are generally accessible and in fact desirable on the street grade of apartment houses. For this reason the lower stories of the apartment hotel may be designed in quite a different character from that which is found upon the remainder of the structure. In that a solid appearing base may be created as a foundation for the mass of the structure above. This lower course is preferably developed in stone, occasionally of granite, but more often of limestone, marble, or some other of the quarried stones having a natural character and texture which gives them a warm and pleasing color and appearance. The entrance door, of course, becomes the focal point in the entire architectural plan. It may be developed with considerable fine ornamental detailing, especially where the cost of the facade is of simple pattern. There is an opportunity here for the introduction of the architect's keen conception, for above all other elements the entrance detail establishes in the mind of the owner and tenant the quality and character of the building. For practical reasons the entrance should be so designed as to offer protection to the visitor during inclement weather, either by means of a narrow or where the building is set back from the street by means of a short private driveway leading under a porte-cochere. Where neither of these features are permissible or desirable, either because of city building regulations or because of their expense,



Entrance—Wald Park Hotel, Cleveland, Ohio.
Gen. E. Price & Sons, Architects

on the architectural scheme which has been determined upon, a provision should be made for the erection of temporary canopies during stormy weather.

Because of the architectural importance of the lower floors of the building, the windows in the first story generally require special architectural treatment. Where it is possible to utilize the street front of the building for the public rooms of the hotel it is easy to make these windows of the size and character which is in step with their importance. When it is necessary to use this ground story space for other purposes where relatively small windows must be used or where store fronts must be installed, it is generally necessary to frankly subordinate the window treatment to a second row of windows one story above and make them the dominant architectural feature of the lower part of the building, subordinated only to the entrance feature.

The size and arrangement of windows in apartment hotels requires some special thought because there may be a conflict of interest between the shape and proportion of windows desired for attractive fenestration from the exterior view point, and the necessity for window treatment in harmony with the scale and architectural character of the guest rooms. The apartment hotel layout generally

provides side by side an alternating arrangement of living rooms, bed rooms, and occasionally of outside baths and kitchens. The windows which would be appropriate for the living room might be out of proportion for the smaller bed rooms and would certainly require special treatment if used for baths and kitchens. Furthermore, the type of window employed as to shape and proportion of the glass units if considered from only one viewpoint rather than from both, might result in obtaining unsatisfactory proportioning from either the internal or external aspects. This might be made more apparent by considering the problem of designing the building with an exterior facade following the grand manner of the 18th century French architecture with rooms of moderate size developed in a Georgian style. The exterior treatment would demand windows with relatively few muntins and large panes of glass and the windows themselves would tend toward a rather large scale with a tendency toward an elongated vertical dimension. The Georgian interior on the other hand would call for windows that were fairly broad and not too large with the sash divided by muntins and relatively small frames. Again an exterior treatment following a Colonial character would be difficult to harmonize, as far as windows are concerned, with apartments developed in the Jacobean



Solarium—The Gaylord, Los Angeles, Cal.
Walker & Eisen, Architects

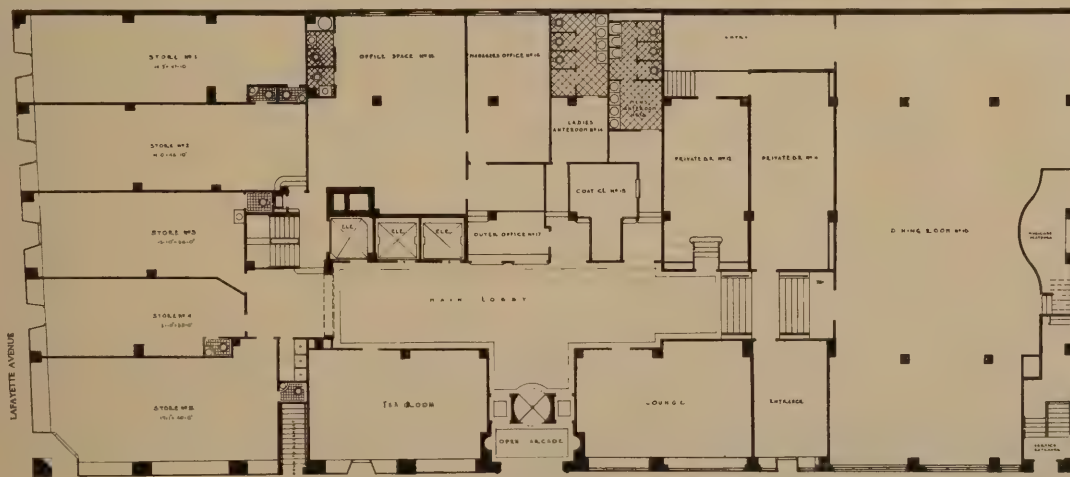
Granada Apartment Hotel

Brooklyn, N. Y.

*Wm. I. Hohaus, Inc.
Architects*

The Hotel Granada is a sixteen story building of fireproof construction containing 365 rooms arranged in one, two and three room suites. There is a large solarium on the roof surrounded by a promenade. On the main floor, besides the usual lobby space, there is a lounge, a dining-room with two private rooms and six shops.

The complete contract for the Furnishings and Equipment for the Hotel Granada was executed by the PICK-BARTH Companies.



Main Floor Plan



Typical Floor Plan

JUST as the Engineering staff of the PICK-BARTH Companies complements the architect in the technical phases of hotel planning, the PICK-BARTH Interior Decorators and Furnishing Specialists are of assistance in carrying the Interior Architecture to a successful end both practically and esthetically. An explanation of their methods and an exhibit of their furnishing work are contained in the chapter on Hotel Furnishing on pages 213 to 276.

period in which casement windows would be preferred from a stylistic viewpoint. For this reason there must be a careful harmony between the two aspects of the window problem which in turn generally means that the interior decorative treatment of the majority of apartments must be in step with the character of the exterior.

An interesting opportunity for special treatment of some of the apartments in the taller city buildings has been introduced to the apartment hotel field by the adoption of zoning ordinances of the New York type calling for set-back stories. It is becoming quite popular to use the set-back areas for small private terraces serving the apartments which adjoin them. The necessity for set-back stories can be converted to profitable use, for higher rentals can generally be obtained from permanent residents in those apartments which have the added attraction of such an outdoor balcony.



Entrance Detail, Georgian Apartment Hotel, Evanston, Ill.
Albert Hecht, Architect.

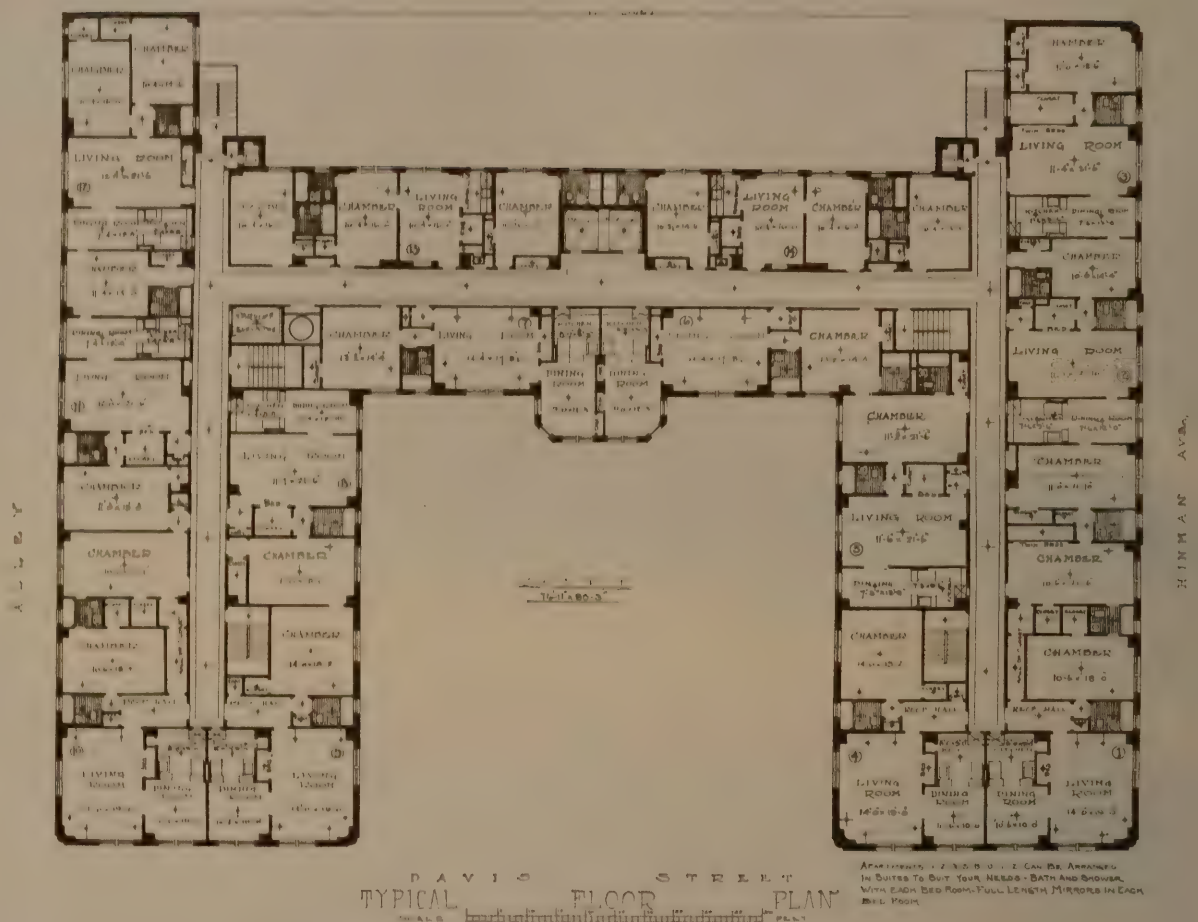


The Arcady, Los Angeles, Cal.

A GROUP OF TYPICAL RESIDENTIAL HOTELS

FOLLOWING WILL BE FOUND
PLANS AND ILLUSTRATIONS
OF SEVEN REPRESENTATIVE
AMERICAN HOTELS OF
THE RESIDENTIAL TYPE





The Georgian Apartment Hotel

Evanston, Illinois

Albert Hecht, Architect

THIS is representative of the modern apartment hotel developed for service in the outlying residential communities of a large city. The Georgian is located in Evanston, one of the older fine residential districts of Chicago, and has been carefully designed for the occupancy of families requiring a high class living environment, coupled with relief from the cares of domestic administration. The main floor is laid out in attractive public rooms, including lounges for men and women, a social room, a fraternity room, and similar attractive features. Tea-rooms and a large main restaurant complete the equipment for the entertainment of guests and their friends. The layout of apartment units is clearly indicated in the typical floor plan above. It will be noted that these units are flexible in arrangement and consist of two and three room apartments, practically all of which have kitchen-dining room combinations, efficiently planned with built-in equipment which provides the necessary housekeeping facilities within a minimum of space. This building contains approximately 98 apartments of two to four rooms and 105 single rooms and is of modern fireproof construction. A particularly attractive feature is the combined roof garden and ballroom which is used for both public and private functions.

The complete contract for the Interior Decoration, Furnishings and Equipment for the Georgian Apartment Hotel was executed by the PICK-BARTH Companies. The Door Beds, Kitchenette Cabinets and other Space Saving Equipment were installed by The "White" Door Bed Company (affiliated with the PICK-BARTH Companies).



The Georgian Apartment Hotel, Evanston, Ill.



View of the Lobby of the Georgian Apartment Hotel

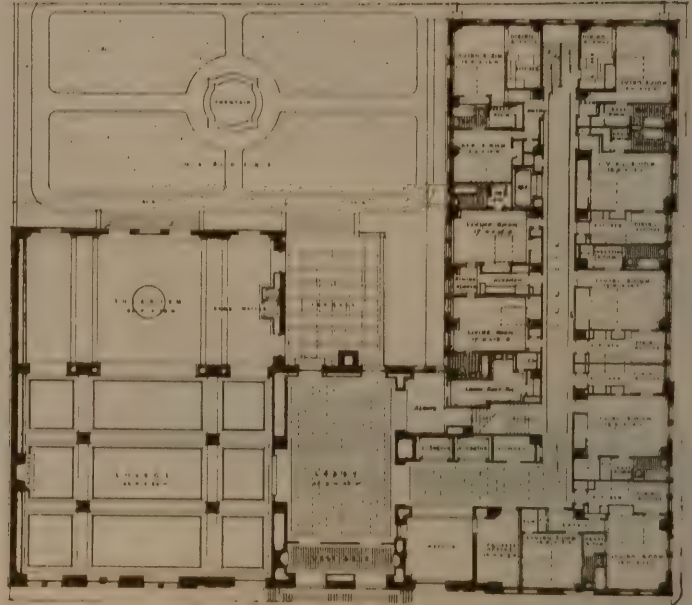
The Gaylord, Los Angeles, Cal.



Living Room by Day, with Bed Concealed

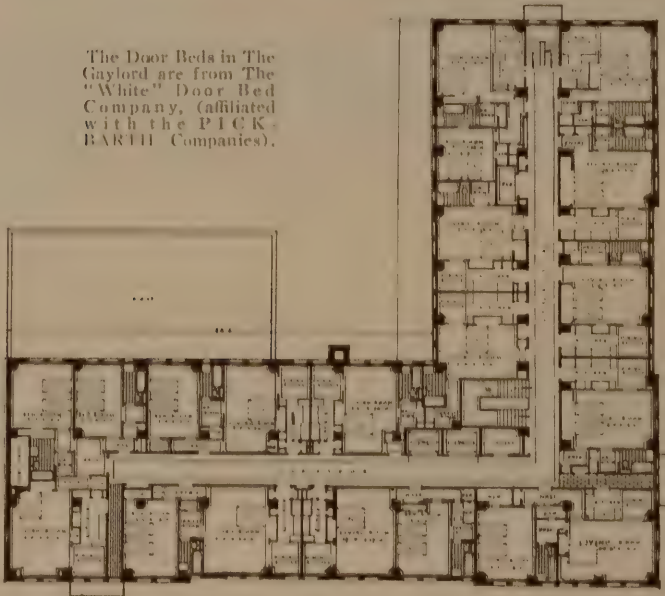


Living Room at Night, with Bed Open



Above Is Shown the First Floor Plan

The Door Beds in The Gaylord are from The "White" Door Bed Company, (affiliated with the PICK-BARTH Companies).



Typical Floor Plan



Two Views in the Lounge

AS may be seen from the typical floor plan and the two guest room apartments shown above, The Gaylord has made excellent use of the "Efficiency planning" idea in a large share of its apartments. The disappearing beds are of the door bed type, affording perfect concealment, as the door is finished to match the walls. Both full sized and twin disappearing beds are used, in some cases replacing a bedroom and in others as additional accommodations.

The complete contract for the Interior Decoration and Furnishings of The Gaylord was executed by the PICK-BARTH Companies.



The Gaylord, Los Angeles, Cal.

Walker & Eisen, Architects

THIS great apartment building is one of the finest of its kind in the country. It was completed in 1924 at an approximate cost of \$2900 a room, or 65 cents a cubic foot. It contains 167 apartments, each with bath, making a total of 426 rooms counting living rooms, bedrooms and the combination kitchen and dining alcoves, the latter being counted as a single room unit. The building is of reinforced concrete construction with brick filler walls and is faced with pressed brick and trimmed with terra cotta. The apartments throughout are of housekeeping type, so that restaurant service is not provided, but each apartment has a kitchen-dining alcove combination developed in a small space through the use of compact equipment.



The Seville Apartment Hotel, Detroit, Mich.
Chas. N. Agree, Architect



Plan of Typical Floor

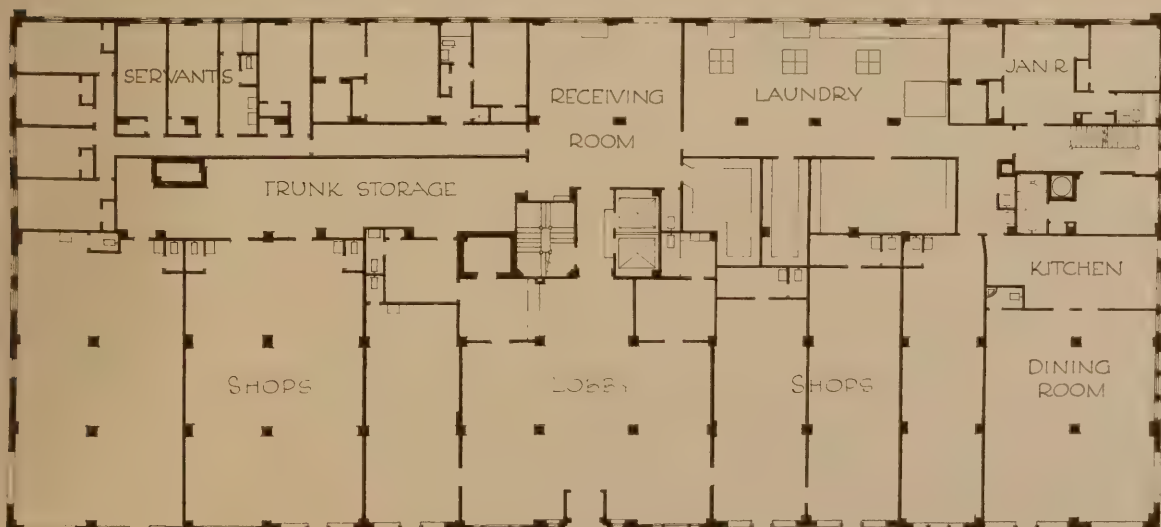
The Seville Apartment Hotel

Detroit, Mich.

Chas. N. Agree, Architect

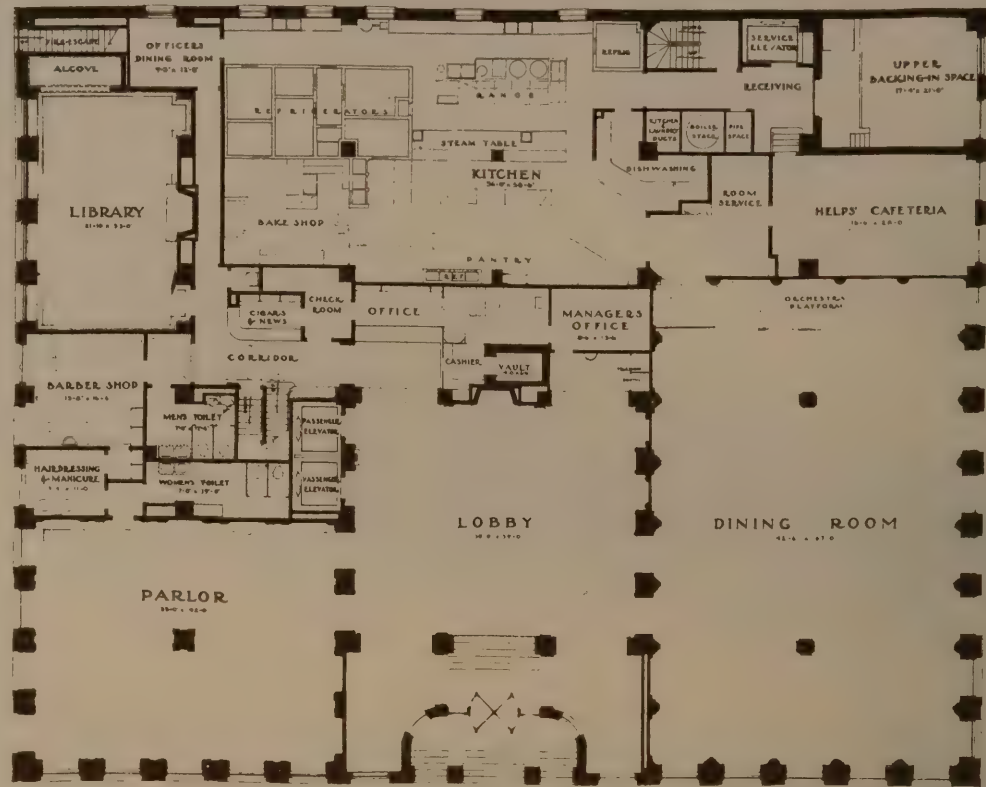
THIS is a residential hotel, eight stories and basement in height, fireproof reinforced concrete construction, finished on the exterior with pressed brick and trimmed with Bedford stone. It contains 341 rooms and 155 bath rooms, divided into 1, 2 and 3 room suites. It also has a dining room and seven stores on the first floor. This building, exclusive of land, furnishings and equipment, cost approximately \$780,000; furnishings and equipment—\$150,000.

The contract for the Interior Decoration and Furnishings of the Seville Apartments was executed by the PICK-BARTH Companies.



SCALE
0 10 20 30 40

Plan of First Floor



Ground Floor Plan, Hotel Pearson, Chicago



Typical Apartment Floor Plan, Hotel Pearson, Chicago



The Hotel Pearson, Chicago, Ill.

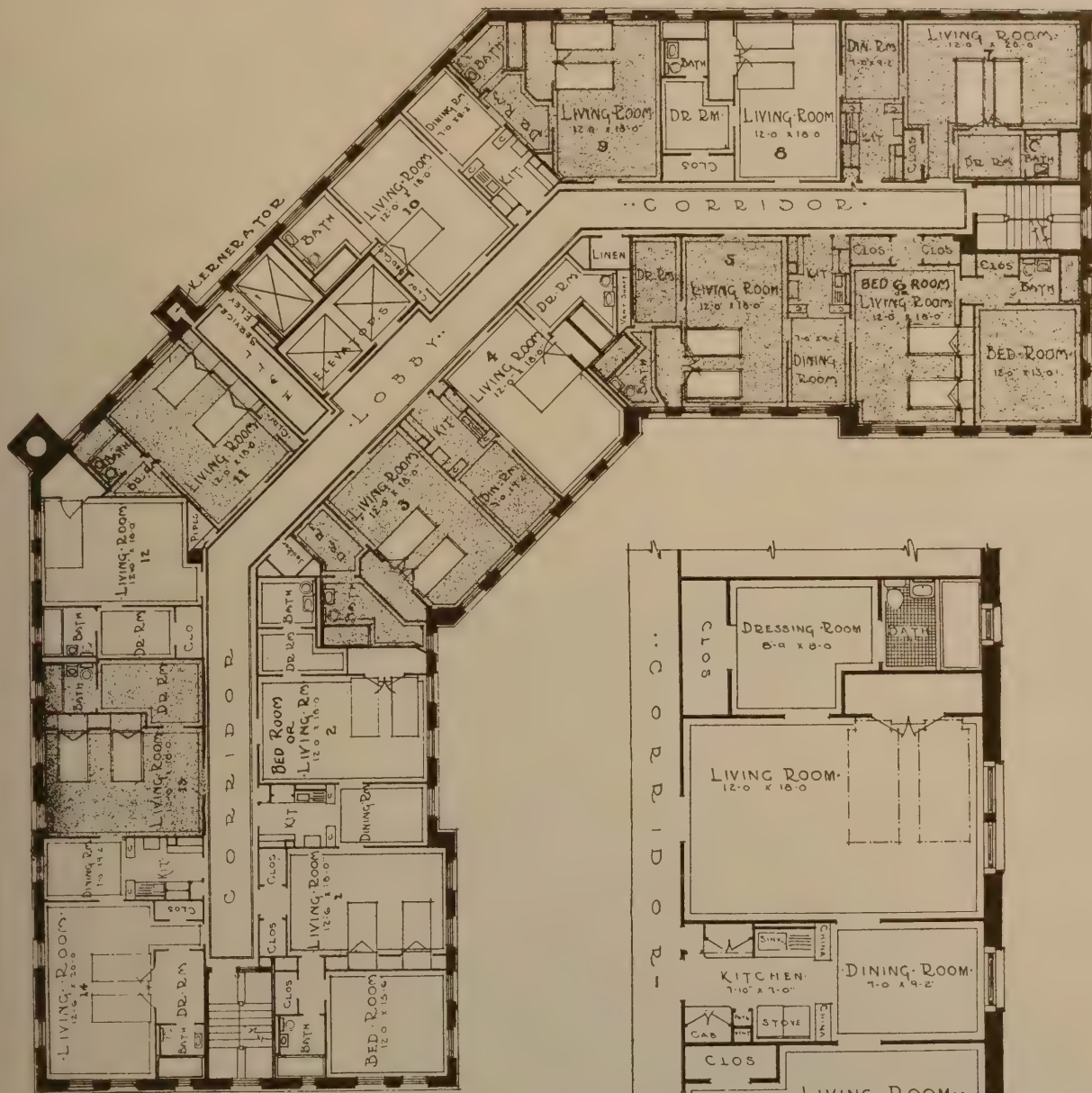
Robert S. De Golyer & Co., Architects

THIS combined transient and residential hotel was completed in 1923 at an approximate cost of \$3500 a room or 60 cents a cubic foot. It is a reinforced concrete structure with exterior walls of face brick and stone on hollow tile. The hotel contains 280 rooms, all with bath, and 30 living rooms which make up suites, or a total of 310 rooms, in all. The living rooms are so arranged that two or three room suite combinations can be made. As shown in plans on the opposite page, the ground floor is given over entirely to spacious public rooms and to the large restaurant and kitchen.

The complete contract for the Furnishings and Equipment of the Hotel Pearson was executed by the PICK-BARTH Companies.



The Hotel Plaza, Houston, Texas
Joseph Finger, Architect

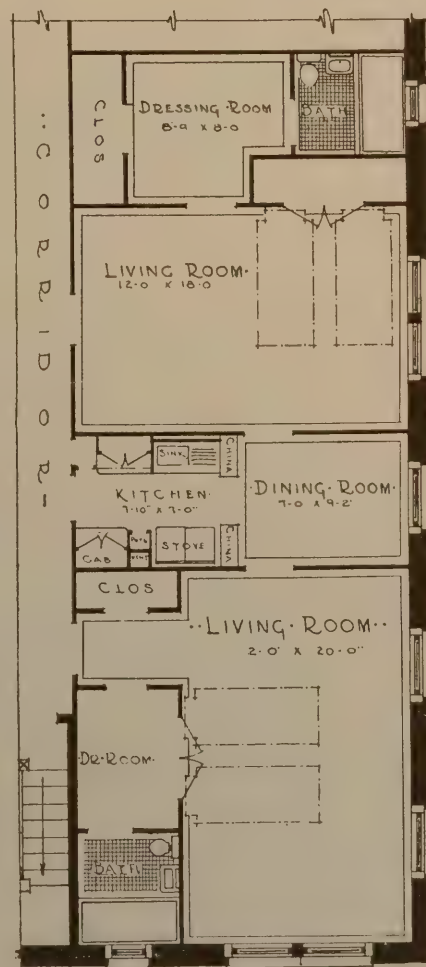


The Hotel Plaza

Houston, Texas

Joseph Finger, Architect

THE Plaza is one of Houston's first apartment hotels, eight stories in height and containing 105 apartments, ranging from one to seven room unit combinations. Typical efficiency apartment units are shown in the detailed plan at the right, indicating the flexibility of the plan and showing the use of door beds to give double purpose efficiency to most of the rentable space in the building.



·TYPICAL UNIT·

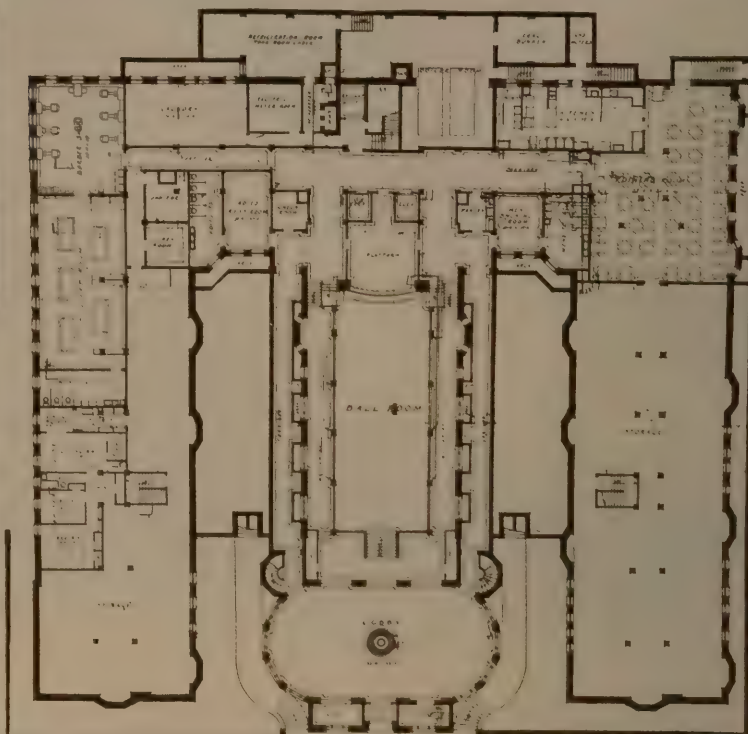
The complete contract for the furnishings of the Hotel Plaza was executed by the PICK-BARTH Companies.



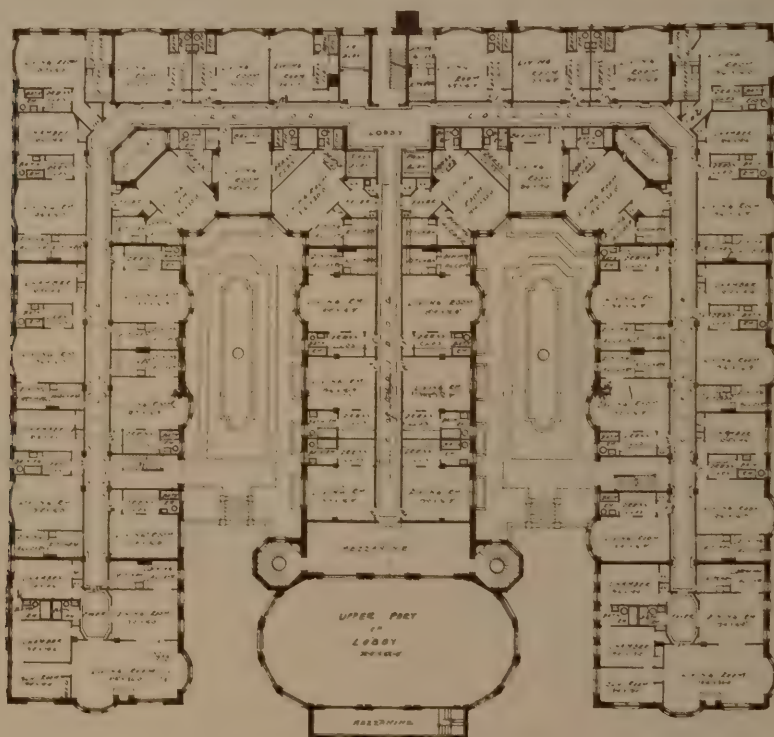
Living room by day, with bed concealed



Living room at night, with bed open



BASEMENT PLAN PARK LANE VILLA
REYNOLD H. HINDS, ARCHTCT
CLEVELAND, OHIO



GROUND FLOOR PLAN PARK LANE VILLA
REYNOLD H. HINDS, ARCHTCT
CLEVELAND, OHIO

Plans of Park Lane Villa, Cleveland, Ohio

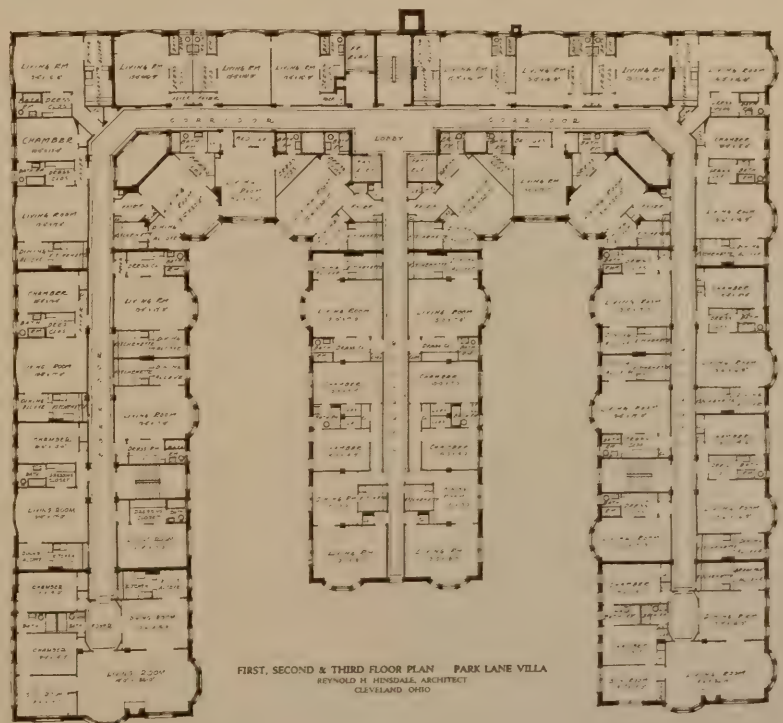


Park Lane Villa, Cleveland, Ohio

Reynold H. Hinsdale, Architect

THIS apartment hotel, recognized as one of the finest in the country, was completed in 1922 at an approximate cost of 75 cents per cubic foot. The building is of steel frame construction with brick and stone exterior. It contains a total of 193 suites which, in all, represent combinations of 350 rooms, exclusive of dining space, kitchenettes and baths. Here again various features of efficiency planning have been incorporated, including the use of door beds and of space saving equipment in dining room and kitchen spaces. The plan is developed in an unusual manner to insure ample light and air for tenants and still retain a considerable degree of privacy through segregation into wings having large courts in the center. The plans on this and the opposite page are thoroughly descriptive of the general layouts and small illustrations show typical double purpose living rooms.

The complete contract for the Interior Decoration, Furnishings and Equipment of the Park Lane Villa was executed by the PICK-BARTH Companies. The Door Beds, Kitchenette Cabinets and other Space Saving Equipment are by The "White" Door Bed Company (affiliated with the PICK-BARTH Companies).

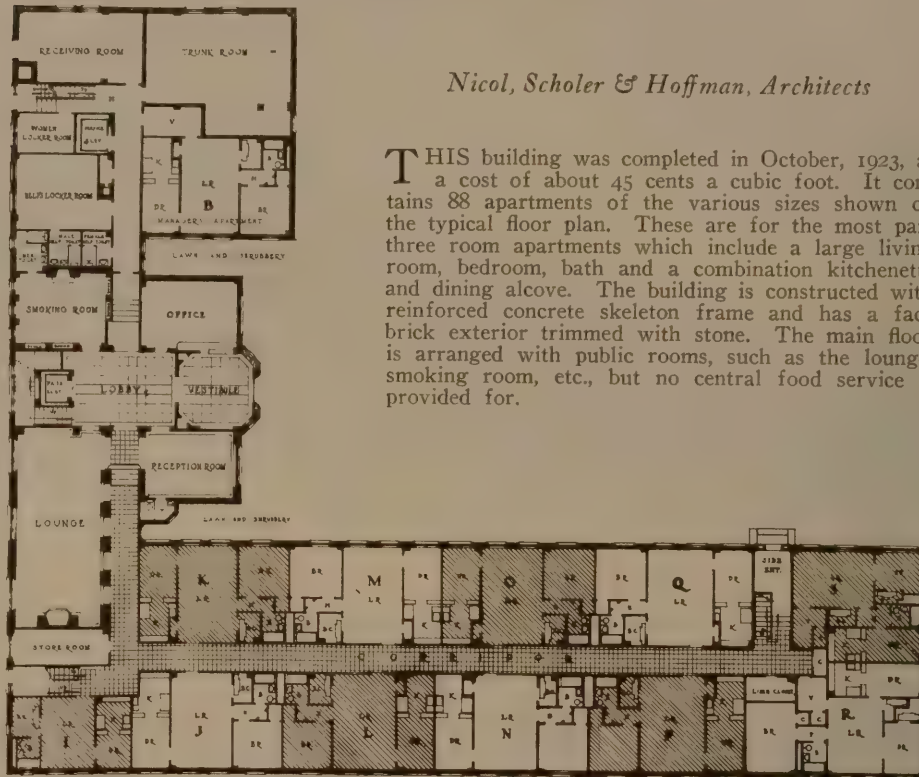


The Mar Main Arms Apartment Hotel

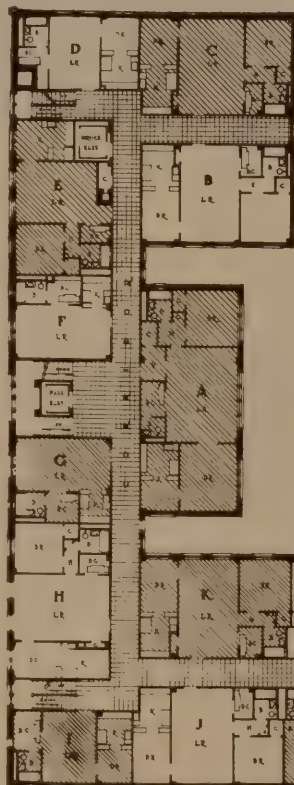
South Bend, Ind.

Nicol, Scholer & Hoffman, Architects

THIS building was completed in October, 1923, at a cost of about 45 cents a cubic foot. It contains 88 apartments of the various sizes shown on the typical floor plan. These are for the most part three room apartments which include a large living room, bedroom, bath and a combination kitchenette and dining alcove. The building is constructed with reinforced concrete skeleton frame and has a face brick exterior trimmed with stone. The main floor is arranged with public rooms, such as the lounge, smoking room, etc., but no central food service is provided for.

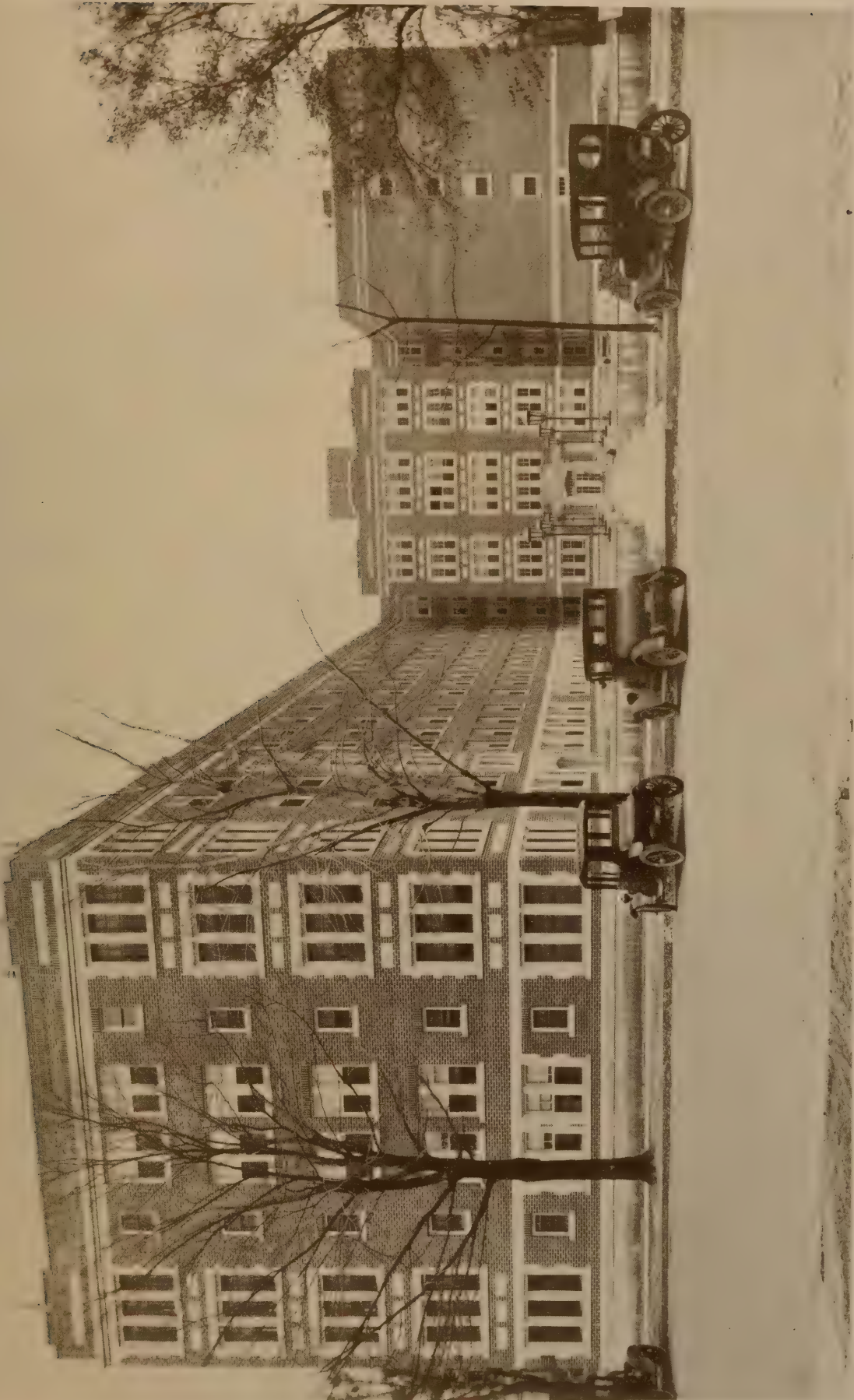


Main Floor Plan



The Furnishings of the Mar Main Arms Hotel were supplied by the PICK-BARTH Companies.

Typical Floor Plan



The Mar Main Arms, South Bend, Indiana



Webster Hall, Detroit, Michigan

Halpin & Jewell, Architects

A METROPOLITAN men's Bachelor Hotel of a type that has proven most successful. The hotel caters to a class of patronage having moderate means. The guest rooms, as shown by the illustration on page 241, are very small and simply furnished. Nevertheless they are in excellent taste and the furnishings were selected with a careful eye to the things which appeal to men. In contrast to the smallness and simplicity of the guest rooms, the public rooms are large, numerous and are luxuriously appointed, presenting the aspect of a high class club. Among these rooms are a large general lounge, a lounge and smoking room for men, a men's card room, a ladies' parlor and the splendid interior dec-

oration and furnishing treatment given these rooms may be seen from the photographs shown on pages 237, 271 and 272. The club-like atmosphere of the hotel is further heightened by the presence of a swimming pool, gymnasiums, etc. Thus the young men guests are enabled to live at modest expense with unusual social conditions as well as a beautiful environment. A hotel of similar character of the same name and under the same management is operated in Pittsburgh, and is illustrated on pages 185, 233-6, 270 and 271. The Interior Decoration, Furnishings and Equipment for both these hotels were executed by the PICK-BARTH Companies.

The Bachelor Hotel

While it is essentially a residential hotel, and many of the factors already described apply to its planning and construction, the bachelor hotel has been set aside for special consideration because of important differences which will appear as this chapter develops.

The bachelor hotel, as its name implies, is an institution developed for single men or women who are desirous of the service and amenities of a home-like atmosphere without the burden and expense of maintaining a separate domestic establishment. For the most part these are the younger unmarried business men and women, earning a fair or even high income. They are persons of discrimination who make little or no use of living quarters by day, but at night require comfortable environment and often a place to entertain.

Within the past few years there has been a most interesting development of this type of service in the residential hotel field and considerable study has been given by such groups as the Allertons and Webster Halls to the needs of this special group. Several of these hotels are illustrated herewith indicating many of the special points which must be considered when building of this nature are being planned.

It may be said that the bachelor hotel is a cross between a dormitory and an apartment hotel. Usually it is designed for a one class occupancy, either male or female (although as in the case of the Hotel Shelton, New York, it may house both). A further segregation of income classes is usually involved because most of these buildings are designed to meet the need of specific ranges of income. Beginning perhaps with simple structures for wage earners of limited income, bachelor hotels may ascend the scale to the point of providing luxurious quarters for highly paid executives. No attempt can be made in such hotels to cover the entire cross section, they must be one thing or the other for obvious reasons.

These hotels are not designed for the accommodation of daily transients. The apartments of one or two rooms are usually offered for rental periods ranging from one week to one year with rate reductions according to the term of occupancy. Rooms are rented furnished with complete service.

Two Planning Points of View

In examining the plans and experience records of buildings of this type two opposing viewpoints are clearly indicated. The first is the minimum room size plan—the second involves larger rooms. Both apparently have their functions and places in catering for this class of trade.

Considering these planning theories one at a time we may first analyze the minimum room size plan as used in various houses. Here the planning theory is to provide comfortable sleeping quarters in a room occupying as few square feet as possible, so that rentals may be as low as might be compatible with the average income of young business

people. The minimum sized room accommodates bed, dressing table, chair, floor-lamp, etc., enough for the purpose, but not permitting trunks or general living paraphernalia. The public space is made unusually attractive and homelike. Lounges, reading and writing rooms, and other accessories are provided so that there are complete facilities for a comfortable existence without high overhead. Under this plan system however it is to be noted that the *income per square foot* is very high. With a reasonable occupancy percentage the return on the investment is excellent.

The Food Service Question

As the scale of planning goes upward to encompass higher rentals, facilities are more ample to the point perhaps of luxury. Thus we find great bachelor hotels with larger bedrooms, suites, swimming pools, gymnasiums—in fact with the full service equipment of luxurious dwellings, but again without the usually attendant cares and costs of individual domestic establishments.

In most of these hotels food service is not provided to the individual rooms, at least on any but the ordinary commercial hotel room service basis. Great care is given to the planning of food service space and its equipping. Here every effort is made to supply good palatable food at reasonable cost, comparable let us say with grill or cafeteria service as we know it in the average modern hotel. Restaurants are attractively designed to provide an environment into which the young business man or woman may bring friends without embarrassment. Restaurants generally are smaller than in other types of hotels of equal size because a large percentage of tenants dine or are entertained elsewhere. Consequently the relative size of the gross food income, compared with gross room income, is much smaller than in other types of hotels. It is to be noted too that quick service rules the demand rather than leisurely breakfasting, luncheon or dining. In some cases, however, a very good outside restaurant business is possible, and food service facilities of greater capacity are provided.

Having in mind these thoughts on food service it is found that by careful planning and the judicious selection of efficient cooking and food handling equipment the restaurant and kitchen of the bachelor hotel may be maintained on such a low overhead basis that food service represents no loss and often a profit item.

In planning bachelor hotels, except those of the more luxurious type, it is quite unnecessary to have a bath with each room although a wash bowl is often provided. Central sanitary facilities located in convenient groups are entirely satisfactory. Room service of all kinds is reduced to a minimum; elevator capacity can be much less because the traffic is much less. In fact the construction cost of this type of building can be much less per dollar of anticipated income than in any other type of hotel.

Hotel Savarine, Detroit, Mich.

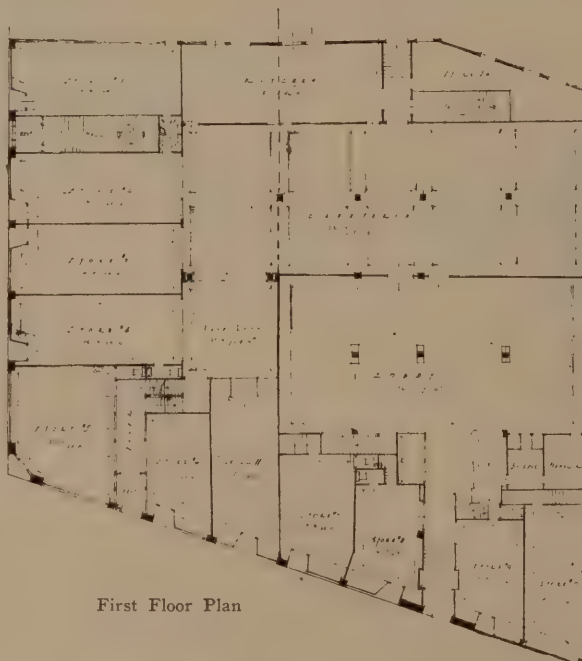
*Louis J. Chesnow,
Architect*



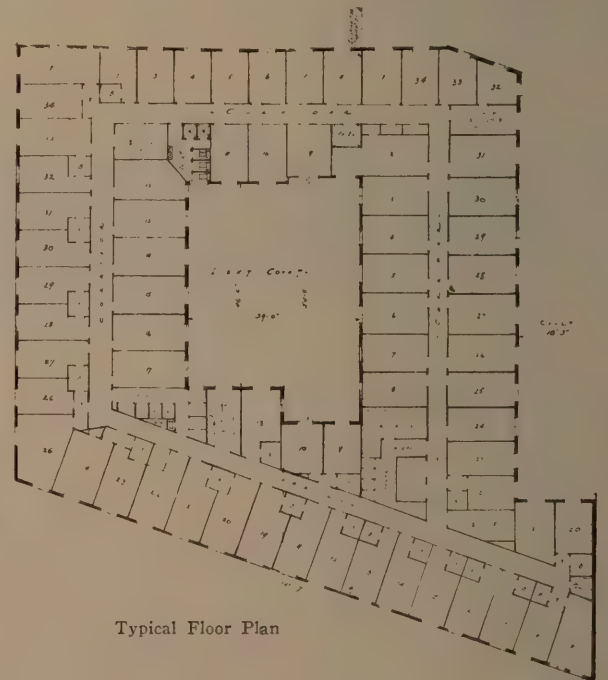
THIS hotel represents an interesting innovation, being one of a new type of bachelor hotels which are appearing throughout the country to meet the needs of single men who wish to live in homelike, comfortable surroundings but who do not have club facilities.

THE Savarine Hotel is of particular interest because it is entirely a bachelor hotel containing in all 524 rooms, requiring an investment of approximately \$1,350,000. The architectural style is modified Italian Renaissance. The construction is of concrete and steel with exterior of red face brick and trim of Indiana limestone. The rooms are arranged for convenience and comfort, each having a double bed and shower with ample closet space. The public rooms, which include an attractive library, have been designed and furnished in a homelike atmosphere, which provides ample facilities for guests to entertain their friends. Many of the features brought out in the accompanying text are to be found in the Savarine Hotel, and the club spirit of the building is further developed by the activity of the hotel management in establishing various athletic teams, contests, etc.

The furnishings of the Hotel Savarine were supplied by the PICK-BARTH Companies.



First Floor Plan



Typical Floor Plan



The Chatelaine—Women's Bachelor Type Apartments, Chicago
Roy France, Architect (See Page 136 for Plan)

Space Saving Equipment Necessary

For the efficient planning of this type of building the door bed and other space-saving conveniences offer unusually rich possibilities which so far have been much less appreciated than they should be. This type of installation provides double purpose rooms which may be attractive living rooms by day and bedrooms at night. This idea is rapidly gaining popularity because the double purpose room offers from the tenant's point of view far greater facilities for comfortable living and for entertaining. This plan is almost imperative for the women's bachelor hotel because women are prone to use their rooms much more than are men and have many small domestic activities for which provision should be made. For instance built-in ironing boards, compact dressing table and similar features find instantly favorable response and make renting easier.

Architectural Requirements

In the architectural design and the interior decoration of bachelor hotels the club atmosphere should be diligently sought. This calls for distinctive exteriors, preferably without shops and stores. While extreme severity of exterior should be avoided so also should over-ornamentation. The interiors of public rooms will of course vary greatly according to the occupancy, male or female. For men the rugged finishing materials and furnishings are in order, half-timber, hewn beams, tile, stone and iron work. These are the styles of early England and of the Mediterranean countries. Tudor, Elizabethan, Spanish, Italian and similar precedents find an instant response among men. For women's hotels the less rugged, in fact the gracile styles are naturally in order. Interiors of later English and French styles or perhaps Colonial-painted wood-

Plan Analysis of a Typical Bachelor Hotel

Webster Hall, Pittsburgh, Pa.

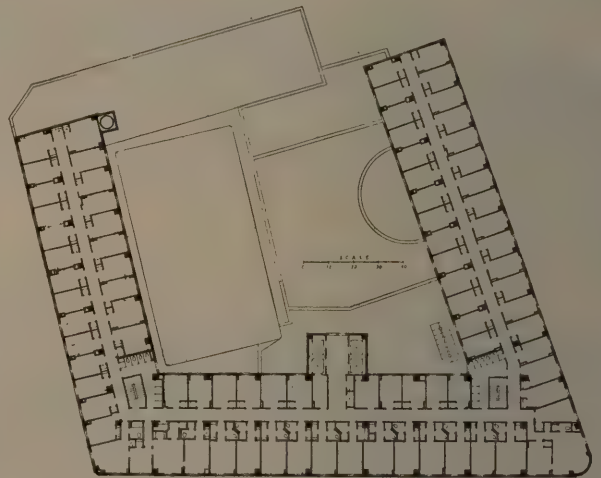
Henry Hornbostel, Architect
Eric F. Wood & Co., Associate Architects
 (See also pages 185 and 233 to 236)

THIS hotel built for the Webster Hall Corporation of Detroit is one of the most interesting of the recently constructed bachelor hotels. The purpose of this particular page is to analyze briefly the elements of planning which are involved. Following the latest thought in the planning of hotels of this nature, the public and semi-public rooms of the ground floor have been developed to provide the maximum facilities for entertaining by guests. Every effort has been made here to keep the atmosphere of a fine home. Thus, the bedrooms, as shown on the typical floor plan (right) are arranged under simple planning primarily for personal use and not for purposes of entertainment, full facilities for which are provided in the public rooms.

The first floor plan below shows an interesting arrangement of the receiving section of the hotel. Immediately upon entering the main door an attractive reception room is found at the left and a special reception room for women at the right. A large and attractively decorated lobby provides access to all parts of the main floor, plan units of which include a large men's lounge, a writing room and barber shop, an unusually attractive conservatory, and, of course, the coffee shop, dining room and private dining room with accessory space. The attractive interior decoration and furnishing of these rooms is clearly shown in the colored illustrations to be found on pages 233 to 236. Every effort here has been made to provide a convenient and luxurious arrangement of the public space.

The typical floor plan is made up almost entirely of rooms averaging 8 to 9 feet in width and approximately 14 feet long all-over. The typical room is well but simply furnished and contains a lavatory and a clothes closet. Each corridor is provided with a general lavatory. Along the front of the building on each floor there is a series of larger rooms varying in width from 10 to 12

feet and having complete toilet facilities, including shower baths. These are, of course, the more expensive rooms and at the corners it is possible to arrange suites. This typical floor plan represents a very careful study in the conservation of space. Within the relatively restricted areas of the typical bedrooms every necessary convenience is provided from the point of view of the average bachelor. At the same time in the typical floor



Typical Floor Plan
 Webster Hall, Pittsburgh, Pa.

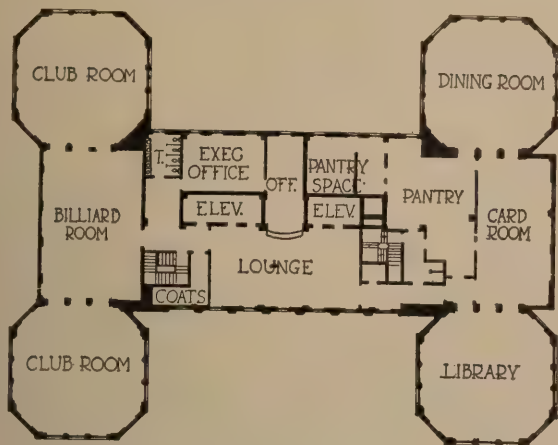
plan no space is given over to anything beyond bare necessities. The arrangement of the plan is such that all rooms have ample light and air and ventilation is reasonably well insured through the possibility of easy cross circulation. The variation in the size and location of rooms provides a reasonable range of rentals and even permits the relative luxury of two or three room suites where they are desired.



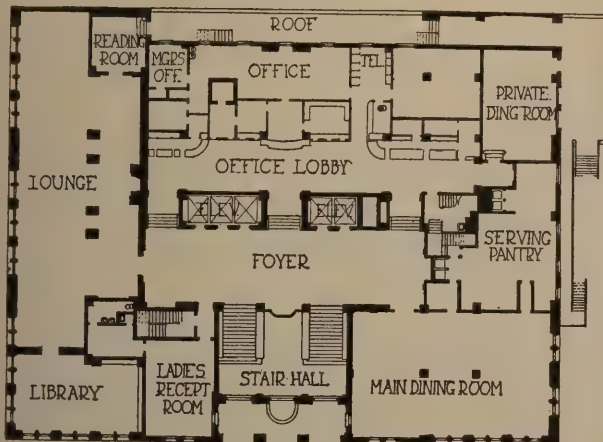
Main Floor Plan

Webster Hall, Pittsburgh, Pa.

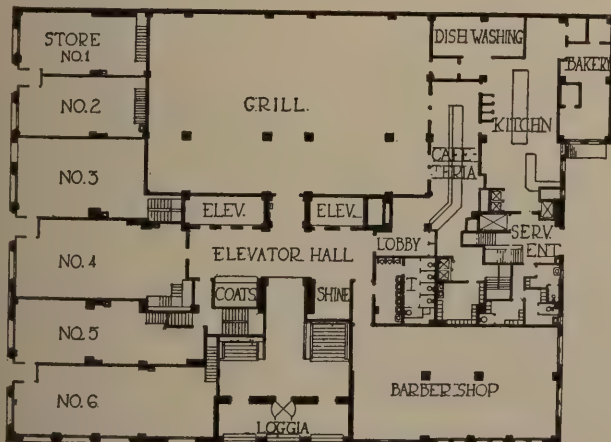
The complete contract for the Interior Decoration Furnishings and Food Service Equipment of Webster Hall, Pittsburgh, was executed by the PICKBARTH Companies as was also the case with the Detroit bachelor hotel of the same name. The unusual character of the furnishing treatment of these two hotels has caused wide interest and may be seen from the color reproductions and photographs shown in later chapters (see pages 233-236 and 270-272).



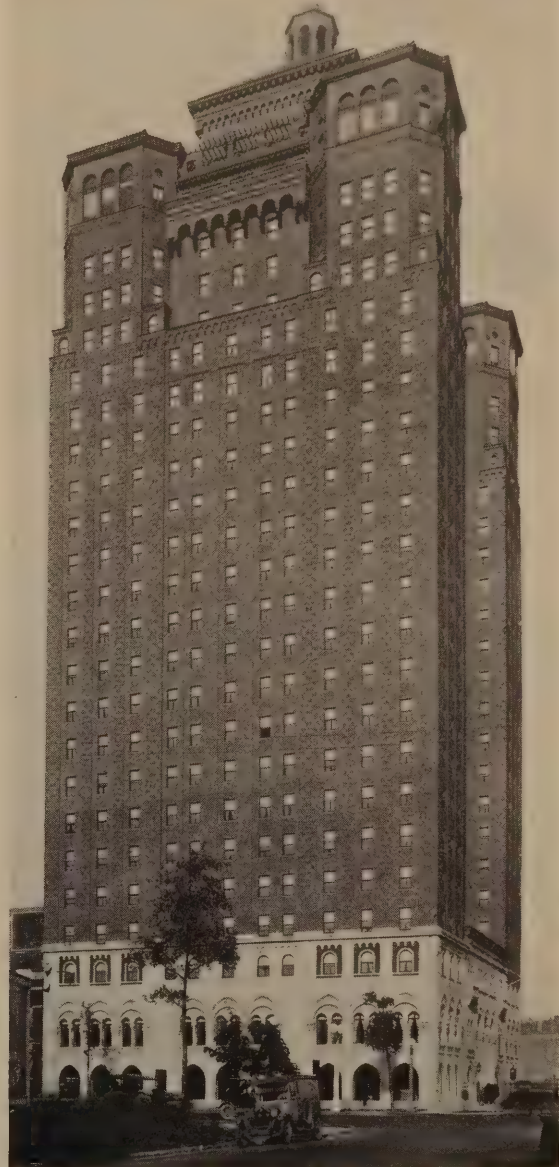
TWENTY-THIRD FLOOR



SECOND FLOOR



ENTRANCE FLOOR



The Allerton

Chicago, Ill.

A Bachelor Hotel

Murgatroyd & Ogden, Architects

(Plans Shown at Left)

A large share of the Furnishings for the Allerton were supplied by the PICK-BARTH Companies.

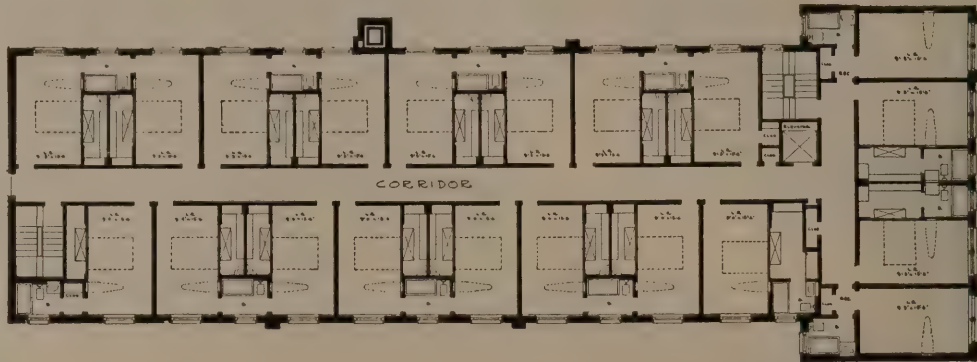
work, dainty wall paper, crystal fixtures in the polished metals—these are the details which gain the quickest response among women.

Here the architect plays a very important part not only because of the extreme care required in developing the plans for this type of building but because both the exterior and certain parts of the interior require extremely careful architectural treatment. The development of period effects means a definite adaptation, not so much of the old materials as originally used, but of the colors, textures, lines

and proportions involved in the disposition of these materials to create the desired architectural effects. The building material market being flooded as it is with a large variety of new decorative products, which, to a greater or lesser degree, faithfully imitate older and more expensive materials, it is obvious that the architect who is thoroughly up-to-date in his knowledge will have recognized among these materials certain possibilities for obtaining interesting effects at relatively low original and maintenance costs. When he can take materials which

Plan of a Bachelor Hotel for Women

The Chatelaine Hotel is Planned in This Manner



THIS interesting plan suggested for a women's bachelor hotel is made possible by the use of space saving equipment. This is an ideal plan not only for a hotel but for women's dormitories, as will be noted by an analysis of the layout above.

The rooms are arranged in groups of two, each room having an individual entrance and communication to central toilet facilities. Door beds are employed with small equipped dressing closets and the built-in ironing boards complete facilities which every woman will appreciate. The fact that these are double purpose rooms that may be used as living rooms and studios during the day is quite important, because as

far as bachelor hotels are concerned, women are much more likely to entertain friends in their rooms than are men, and in college dormitories, nurses' homes, etc., such a room is more or less constantly in use. This type of plan not only provides a far more pleasant living environment, but actually reduces the amount of space required in buildings of this nature. The illustrations below indicate how attractively this arrangement can be worked out. The Door Beds and Space Saving Equipment shown are from the "White" Door Bed Company (affiliated with the PICK-BARTH Companies.)



Living room by day, with bed concealed



Living room at night, with bed open

provide marble or stone effects and gain his desired result at a lower cost, he is rendering a real service for hotels of this character where impressions must be built up without a great expenditure of money, unless the building is to be of real luxurious character and in the position to earn a commensurate rental income. The architect must be familiar with efficiency planning and the existence of various space saving devices, such as described in other pages of this book and which will serve to increase the rental income per square foot of usable space in the building.

The architect must understand the ways of men and women living a single domestic existence which calls for facilities and an environment quite different than any other type of hotel or domestic occupancy. Obviously, nothing but a skillful combination of these various factors and requirements can result in a successfully planned bachelor hotel. On the other hand, buildings of this type offer probably the greatest possible earning potentialities of

any of the various types of hotels. It is an established fact that some of these buildings have earned a considerably higher percentage than the average commercial or apartment hotel.

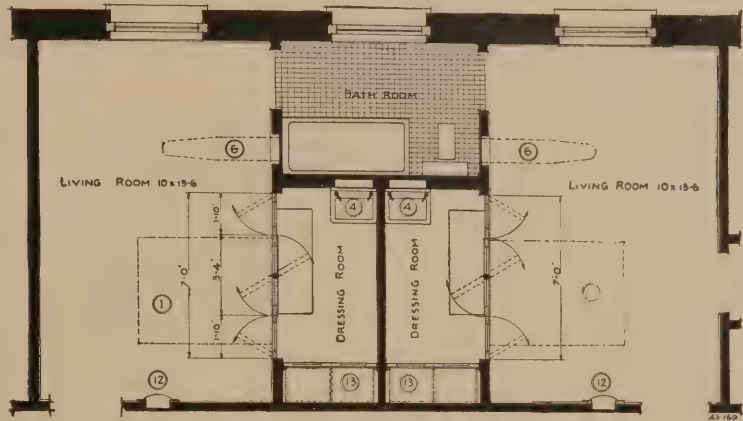
The bachelor hotel as a new project must receive an unusual degree of study to make certain that there is really a demand for this type of occupancy in the locality. Guesswork in the early stages of the project is very dangerous and only by the most careful and scientific analysis can the real need for such a building and its location be determined.

It is quite apparent that in many ways the idea of the bachelor hotel for men, women, or for both is in its early stages, and it can be confidently expected that as this type of hotel unit is proven out by the various buildings now in existence, there will develop a series of standards for planning.

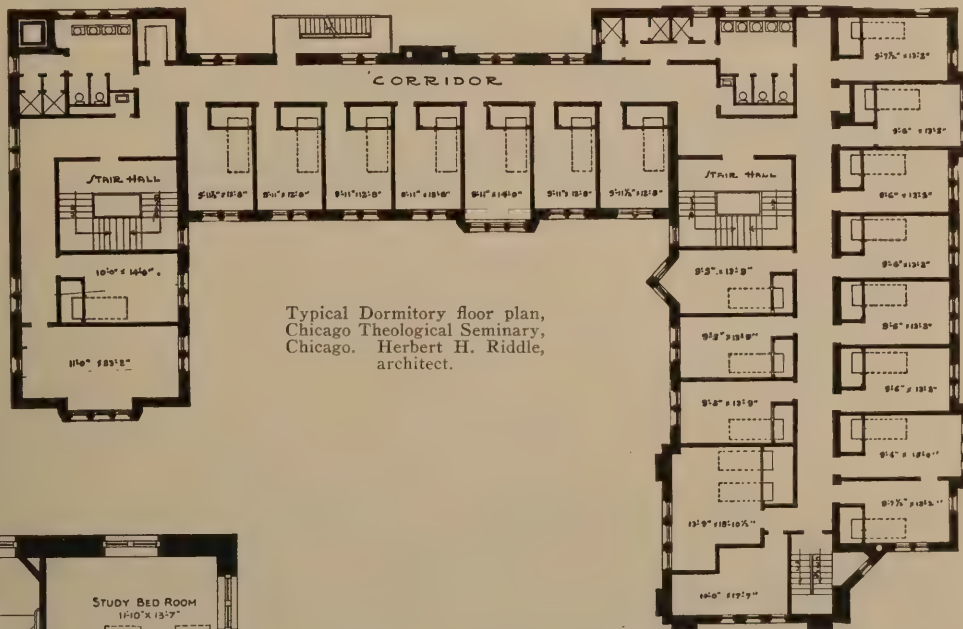
The need for accommodations of this kind both for single persons of the working classes, and also for those who enjoy larger incomes, is becoming more definite with changes in the social structure.

Increasing Plan Efficiency in Bachelor Apartments and Dormitories

How rooms can be made to serve a double purpose with added privacy



Suggestion for a Women's Bachelor Apartment or Dormitory Plan.



Typical Dormitory floor plan,
Chicago Theological Seminary,
Chicago. Herbert H. Riddle,
architect.



Typical Dormitory unit, Worcester Polytechnic Institute, Boston, Mass. W. C. Appleton & F. A. Stearns, architects.

ANOTHER type of plan in which the problem of space efficiency is solved to advantage by Door Beds and Space-Saving Equipment is that of bachelor apartments and dormitories. As such apartments may be termed those in which the occupants of necessity use rooms for two purposes—as bedrooms and as homes. As a rule, these types of buildings must operate on a low rental basis, and for this reason rooms are relatively small and the use of space becomes a feature of paramount importance. A brief analysis of the accompanying plans will show how Door Beds have been used to transform the room space into the double purpose type which is so desirable from the viewpoint of the occupant. The Door Beds are arranged to be disposed of during the daytime which leaves the room free for study, the customary student gatherings, and similar purposes. The atmosphere becomes at once more homelike and attractive. Additional built-in features include Dressing Tables, Wardrobe Cabinets, Ironing Boards, and other equipment, all of which are arranged to utilize a minimum amount of space, except when in actual use. The possibilities of this type of planning are best indicated by the accompanying illustrations. Note particularly the desirability of the use of the bed closet as a dressing room. Equipment of the "White" Door Bed Company is shown in these plans.

See pages 304-311 for further details concerning the Door Beds and Space Saving Conveniences.



The Half Moon Hotel, Coney Island, N. Y.

George B. Post & Sons, Architects

THIS interesting new hotel indicates the possibility of good architecture combined with efficient planning. Here is a hotel which can be seen for miles across the New York Harbor, and its picturesque lines by day or under night illumination never fail to impress. An analysis of the plans will be found on page 148. This is one of the "American" chain of hotels.

AS is fitting for a recreational hotel of this kind, the interior decoration and furnishing treatment gives an air of individuality and contains many novel and interesting effects. Notable among the public rooms is a dining room containing beautifully handled murals depicting scenes connected with the explorations of Hendrik Hudson. The furnishings were by the PICK-BARTH Companies.

American Resort Hotels

In the development of this book every effort has been made to present definite information based on actual experience and on the analysis of a large number of existing hotels. Any consideration of the question of resort hotels is rendered difficult by the fact that each hotel of this type is almost unique in its problems. In other words, it is much more difficult to establish standards based on experience in the case of the resort hotel project than it is for commercial or apartment hotels. For this reason it has been impossible to establish any great amount of tabulated information or to reduce resort hotel experience to the type of figures which might represent dependable averages in their application to individual problems.

Within the past few years the resort hotel business in this country has grown by leaps and bounds. At least three factors have contributed to this growth; namely, the more or less simultaneous obsolescence of many of the large old hotels at famous resorts; the greatly increased patronage of such resorts by a prosperous public; and the development of many new resort districts.

The result of conditions which have arisen from these three causes is to present at once such a confusing cross-section of experience that it is very difficult to derive much valuable information from the economic point of view. If the resort hotel has been built as an aid to real estate development, its results are not necessarily measured in terms of successful hotel operation. If it has been developed to make profits as an operating hotel, the false community conditions which often arise from local real estate speculation may not have provided a fair background for criticism of the actual results of the operation.

The recent real estate activity and its ultimate collapse in Florida is an excellent example of a series of false conditions which might seem to indict the resort hotel, of which a large number were constructed in that territory during the boom period. Many of these hotels are undergoing great difficulties, and in fact find operation impossible. This is due to the fact that they were built not only under the unusual pressure of activity, but in many instances, as accessories to speculative real estate operations. Because of these false conditions, the failure of such hotels was in most cases not due to improper planning or operation, but to poor business judgment or to artificial stimulation.

It is obvious, therefore, that an unusual amount of study must be given to the individual resort hotel project before it is undertaken. Even in resorts somewhat similar in character, the same general type of hotel may not be successful. This is because the human element enters more definitely into resort hotel planning than it does into the planning of hotels for either transient guests or hotels for long period occupancy.

The fundamental requirements of a resort hotel involve the provision of comfortable, homelike surroundings for guests, who in most cases may be expected to remain for a period ranging from one week to several months. Facilities for recreation

and amusement must be provided in a manner unknown to other types of hotels. The element of advertising value involves picturesqueness of design and fidelity to the local scenic or historic background.

In the resort hotel, guests congregate with business and the customary activities of life forgotten in favor of the recreational mood. The difference in atmosphere must be clearly reflected in the design of the interiors and in the plan, which instead of seeking maximum efficiency as in the case of the commercial hotel, may be much more casual, spreading out comfortably instead of being concentrated.

In analyzing various recently constructed resort hotels, three or four fundamental changes and trends became evident. In the first place good architecture has been discovered to have intrinsic value not only as an advertising factor but in creating an atmosphere which guests appreciate. It has been realized that non-fireproof construction is utterly wasteful and for this reason the use of masonry and steel with proper protective provisions has become almost universal. The high cost of maintenance and depreciation has become a strongly recognized factor, so that in the selection of materials and equipment it is to be noted that quality is demanded—longer life which obviates the necessity of writing off the investment in a very short series of seasons.

While it is true that the seasonal factor is, and in many cases must be recognized, it is also true that by the provision of more comfortable facilities, resort seasons are being lengthened and in some cases are approaching the year around condition, when at least the building may be partially self-supporting through operation during what are normally termed the off-seasons.

Another powerful trend in resort hotel planning is the development of far greater efficiency in food service both as to quality and in relation to the equipment which makes food service efficient. The time is rapidly passing when the beauties of nature offer an excuse for poor food or uncomfortable living conditions, and the judgment of the public has been rendered in no uncertain terms by the degree of patronage which more and more is found to be in direct ratio with the physical comforts provided. This is the reason why in many resorts where there is ample room space, new hotels will establish themselves and flourish in competition with the older structures where environment and service are not as good as they should be.

It is anticipated that for some years to come there will be a strong movement in the rehabilitation of older resort hotel structures. It is quite evident that many existing buildings through the magic of remodeling, refurnishing, and the installation of modern equipment can be made to function successfully. If this can be done instead of building an entire new structure, the relationship of income to investment is obviously improved. In fact, in many instances the rejuvenated resort hotel becomes a logical investment where an entirely new structure in the same locality would not be feasible.

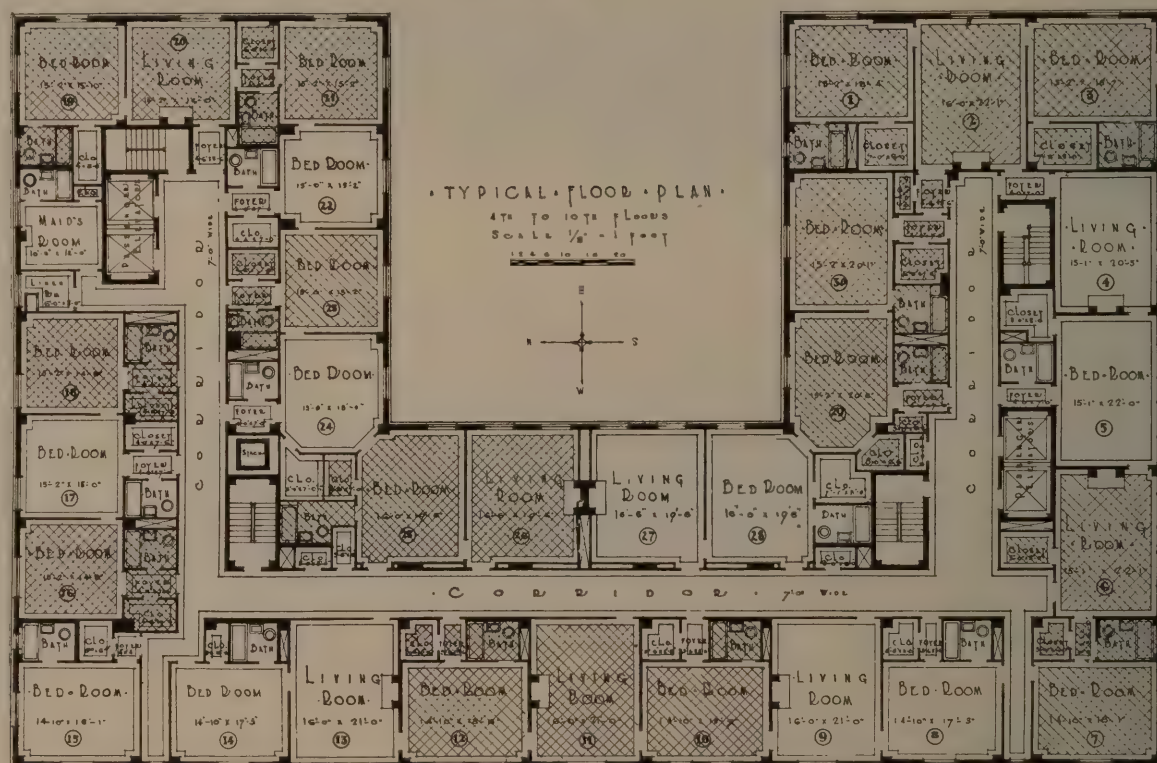


The Whitehall

Palm Beach, Florida

*Martin L. Hampton, Architect
E. A. Ehman, Associate*

The complete contract for the Furnishings and Equipment of The Whitehall (exclusive of the old Flagler residence, which forms part of the public rooms) was executed by the PICK-BARTH Companies.



Typical Floor Plan

THIS beautifully located hotel has been designed for de luxe service and was consequently built with very large rooms and unusually good construction and equipment. The hotel probably cost in the neighborhood of 90 cents per cubic foot. It contains in all 372 rooms, which include 189 rooms with bath, 79 living rooms, 12

private maid rooms, 80 servant rooms. The arrangement is in 79 suites. The approximate cost based on 256 guest rooms is close to \$10,000 per room. The construction is of steel frame work with hollow tile walls furred with metal lath and having stucco exterior.



In a Beautiful Setting of Palms, Pines and Blue Water

Chapter VIII

Analyzing the Resort Hotel Project

In the analysis of the typical resort hotel project a number of new factors enter into the problem which are not present in the development of other types of hotels. Resort hotels are in themselves of such varied nature that any general discussion of the subject must necessarily contain ramifications, some of which will apply to only certain types of buildings.

Resort hotels serve the primary purpose of recreation and change from accustomed types of living and necessarily are situated in sections having natural attractions of one kind or another which draw people away from their permanent homes for a vacation period, ranging from a few days to a season which may run into several months duration. Some resort hotels cater to winter sports, others supply the needs for recreation during the fall or spring and the balance are created to supply the popular demand for summer vacations. Each of these types must necessarily be distinct in many respects from the others, for they not only draw a different type of trade but they must meet various climatic and topographical conditions.

Resort hotels have a peculiar type of occupancy. Some guests are transients who demand the facilities of the typical transient hotel for an overnight stop or a day or two of play. Others come for a

week-end into which they endeavor to crowd a multitude of pleasures for which the resort is famous, and a great many make the resort hotel a temporary home for their customary two weeks' vacation which most business people enjoy at some time during the year. The balance are people not tied down to business cares, who are free to spend an entire season at the resort, and these people necessarily demand a type of accommodation which has something of a homelike character although it must be entirely free from responsibilities, and therefore does not partake of the characteristics of an apartment. Here we have in one building the combination of the commercial hotel facilities for the tourist guest who will pay only nominal rates, transient hotel facilities of the better grade for the week-end guest, and something approaching apartment hotel facilities for those who extend their vacation for a part or an entire season.

Thus, in analyzing a resort hotel problem, a great many features of widely varying character must be brought together and properly correlated to comprise a building which, as has been explained in another chapter, must have a distinctive character that differs widely from the form and appearance of other hotel buildings.

The problem does not stop with the development

Check List of Factors of Analysis

I. LOCATION AND SITE

1. Recognition as a resort locality, recreational and health factors.
2. Special local attractions.
3. Accessibility and convenience for tourists.
4. Outlook, environment, adequate space, freedom from future encroachment.

II. SOURCE AND VOLUME OF BUSINESS

1. Seasonal character of business—length of season.
2. Opportunities for double season or all year opening.
3. Rate scales appropriate to locality, type of guests and facilities.
4. Existing competition and demand for new space.
5. Secondary income—concessions—recreational facilities.

III. SPACE REQUIREMENTS

1. Sizes, facilities, and number of guest rooms for:
 - (a) Transient guests—tourists.
 - (b) Week-end or short-staying guests.
 - (c) Season guests.
2. Dining and food service space.
 - (a) Peak loads vs. average loads on dining facilities.
 - (b) American or European plan.
3. Public Spaces—lounges, reading rooms, office, etc.
4. Recreational facilities.
 - (a) Game rooms, porches, etc., within building.
 - (b) Exterior facilities for sports, including secondary buildings and development of grounds.
5. Help's quarters and service facilities, including water supply, sewerage disposal, electricity, guest cottages and provision for expansion of accommodations.

IV. INVESTMENT

1. Cost of site, buildings, improvement of grounds and recreational facilities.
2. Development costs, including architectural and engineering service, lost interest, carrying charges, cost of mortgages, legal expenses and contingencies.
3. Furnishings and equipment.
4. Working capital.

V. FINANCING

1. Developing the financial plan.
 - (a) Senior financing—first mortgage.
 - (b) Junior financing—second mortgage debenture notes, etc.
 - (c) Equity—owners' investment or funds derived through stock.

VI. INCOME AND OPERATING COSTS

1. Gross income from rooms, less allowance for vacancies.
2. Income (net) from concessions and secondary sources.
3. Fixed charges—interest and amortization requirements.
4. Operating costs, including payrolls, heat, light and water supplies, food, etc.

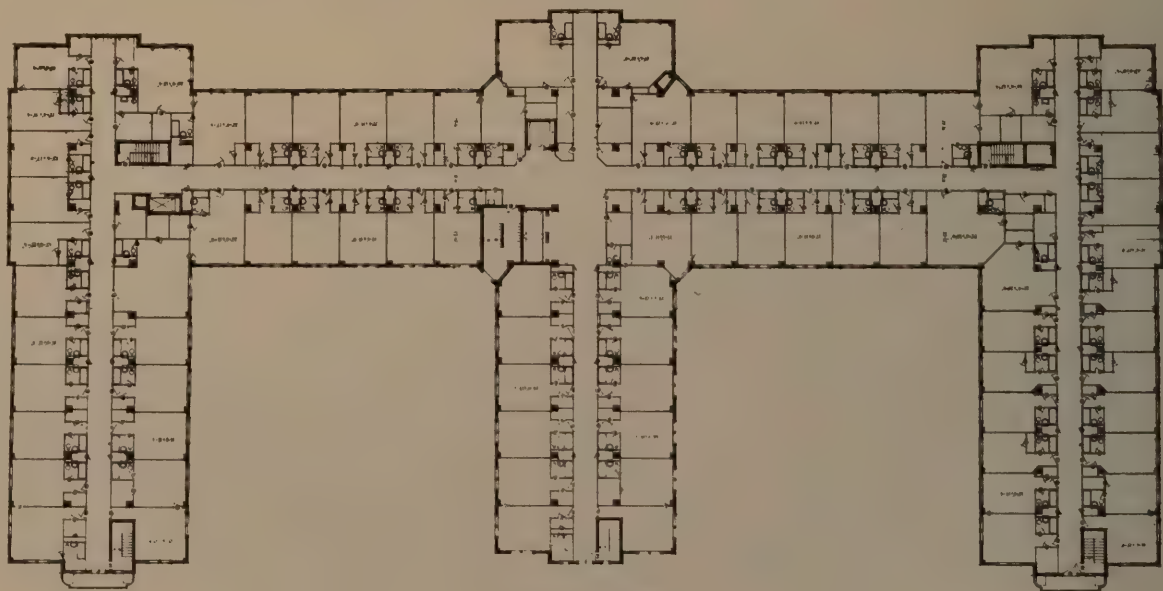


Hotel Don Ce-Sar, Pass-a-Grille, Fla.

Henry H. Dupont, Architect

THIS is one of the latest of the large resort hotels of this country. The typical floor plan shown herewith indicates the general layout of rooms. One-half of the first floor of this hotel is occupied by guest rooms, while the balance of the plan is taken up by large lobbies, a ballroom with stage, and a large corridor. The dining room, banquet halls and kitchen are on the fifth floor.

The complete Furnishing and Equipment contract for the Hotel Don Ce-Sar was handled by the PICK-BARTH Companies.



Typical Floor Plan

of the building alone, but consideration must be given to many new features, including the development of the grounds in which the hotel is situated and either the creation of recreation facilities or some means of associating the hotel proper with existing recreation facilities around which the resort is developed.

The first part of the analysis pertains to the selection of a suitable location and site and this one matter alone in a large measure determines the success of the enterprise. Local conditions must be thoroughly studied to find a situation for the building which will meet popular recognition as a desirable place for a short or long stay. Modern resorts in which views of the surrounding country are a feature require that the hotel have a fairly commanding position with good outlook, and in a large measure this is true of watering places where a view of the ocean, lake or river is part of the enjoyment to be derived. The smaller resort hotels which are situated in the towns and either function as tourist hotels or derive their popularity from a recognition of the healthfulness and charm of the community, require a situation which is permanently visible from the traffic highways and yet not subject to the noise and confusion of a too central location. Each problem must be solved on its own merits, but perhaps the best measure of a successful selection is to choose one which will be recognized by bankers who are expected to supply mortgage funds as a site meriting their participation.

The second step is to analyze the probable income of the building, taking into consideration a number of important matters including the following:

If the resort enjoys only a limited season, the extent of that season must be carefully determined and some study should be given to the matter of the tendency for the season to be prolonged through the expansion of the resort and its increase of popularity or to be shortened because of opposite influences or the increase in popularity of other resorts which are changing the social habits of the class of patrons for which the building is to be erected. The growth in popularity of winter sports is an example of the type of factor which may extend the income producing period of a resort hotel investment.

Following this determination of length of season comes the establishment of rates which are to be charged, based upon a conservative estimate of the attraction value of the new building and a sound knowledge of the prevailing rates in other nearby hotels. To this figure must be added secondary income, which may be derived from recreational facilities either operated by the hotel management or by concessionaires, and the income from garage facilities and from any sub-rental space which may be warranted by the nature of the resort.

The gross income thus estimated should be considered in relation to the probable total investment to be certain that the income will leave a margin



Entrance Colonnade, Hotel Don Ce-Sar, Pass-a-Grille, Fla.

of profit after deducting operating expenses and carrying charges.

The analysis can now proceed to the determination of space requirements in some detail. The first problem is to establish reasonable proportions for the number of rooms designed for transient guests, for week-end guests or weekly guests, and for full season guests. This is a matter which requires a sound knowledge of local conditions and the demand for accommodations of these several types. This is followed by the establishment of a space budget based upon gross area allotted for each type of room or suite, the total space then being divided into floor units to indicate the size of the typical guest room floor plan.

Next in importance is the determination of food service and dining room space—a matter of much importance in a resort hotel because of the necessity for providing dining accommodations for a large percentage of the total number of guests at one sitting. Information based upon many years of practical experience can be had for the asking from the Pick-Barth Companies, which will assure the hotel owner or promoter of a proper space allotment which is neither wasteful through being over optimistic or too condensed for efficient and satisfactory operation. Other service requirements should then be determined, including porters' trunk storage rooms, linen rooms, help's quarters, and the facilities needed for heating plant, refrigeration units and possibly for a self-contained power plant.

In setting up a space budget for public spaces, a great deal of care must be exercised to the end that provision shall be made for many recreational facilities not customarily found in the average hotel, but which are of paramount importance for

Five Interesting Resort Hotels

These hotels were all furnished by the PICK-BARTH Companies



President Apartments, Atlantic City, N. J.
Louis I. Brooks, Architect



Hotel Ritz-Carlton, Atlantic City, N. J.
Warren & Wetmore, Architects



Hotel McAllister, Miami, Fla.
Frank V. Newell, Architect



Hotel Floridian, Miami Beach, Fla.
S. D. Butterworth, Architect



Hotel Lincoln, Miami Beach, Fla.
Price & MacLelland, Architects

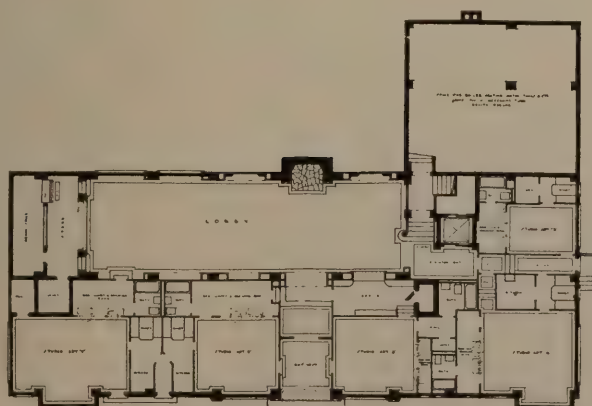


Julia Tuttle Apartments, Miami, Fla.

Gordon Mayer, Architect

THIS six story building contains 90 rooms, 30 of which are designed for transient guests and the balance arranged in suites for permanent occupancy. All of the suites have kitchen and dining alcove. The ground floor is laid out with a spacious lobby and studio apartments. An attractive roof garden and sun parlor have been provided for the use of tenants. The building is of concrete construction and has a stucco exterior trimmed with cast stone.

The complete contract for the Furnishings of the Julia Tuttle Apartments was executed by the PICK-BARTH Companies.



Ground Floor Plan



Typical Floor Plan

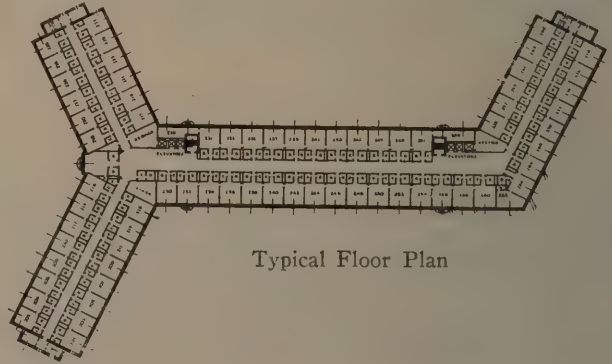


The Vinoy Park Hotel, St. Petersburg, Fla.

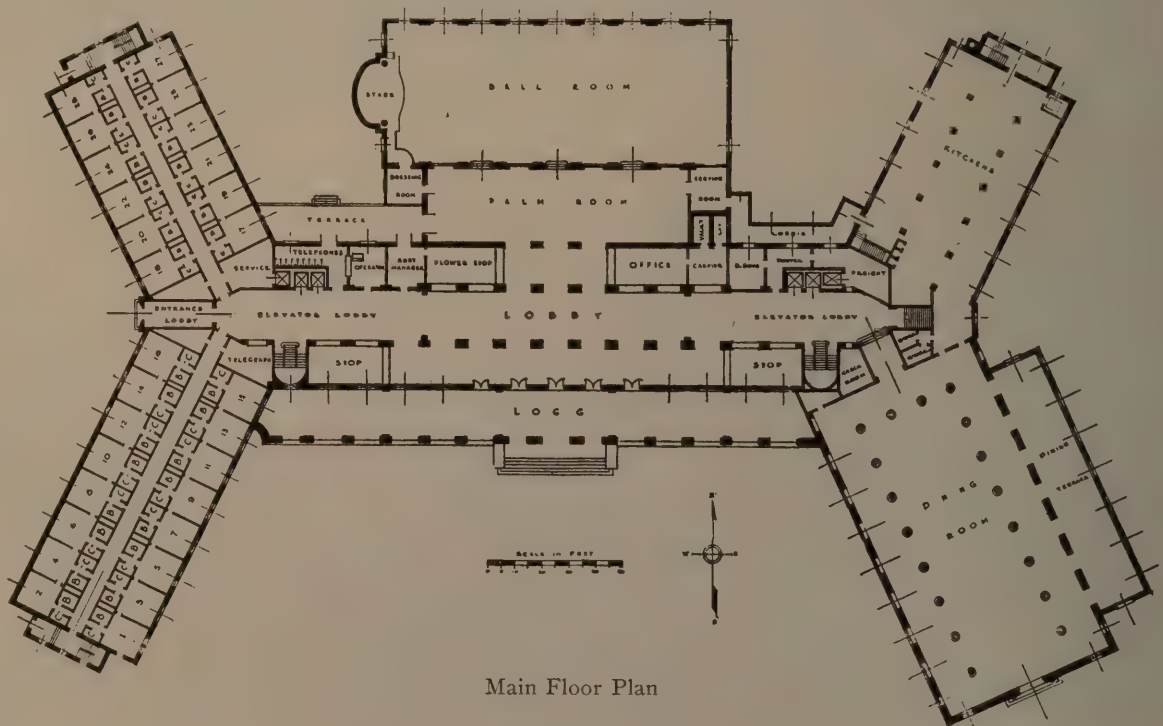
Henry L. Taylor, Architect

This beautiful hotel is an excellent representative of the type which employs a low picturesque building with wide flung wings to take advantage of spacious grounds and an attractive outlook. With such a large floor area, part of the main floor is employed for guest rooms despite the fact that all public rooms are of ample size.

The Kitchen Equipment and a large proportion of the furnishings of the Vinoy Park Hotel were supplied by the PICK-BARTH Companies.



Typical Floor Plan



Main Floor Plan

the entertainment of guests at a resort. This matter must be analyzed with exceeding care for it is very easy to increase the cost of the building for these recreation features beyond the point where they will show a satisfactory return on the investment, and yet it is equally easy to omit for the sake of a reduced initial cost an adequate variety of recreational features and thus hamper the success of the project.

A careful study of older resort hotels and even some of the newer ones will show a great deal of waste space devoted to types of recreation which are no longer popular and a lack of facilities for which there is a general demand. Because of this changing fashion in sports, care should be exercised that some of the recreational space is of a convertible nature, useful for several purposes, depending upon the current demand.

A total space budget for the main building will then determine the approximate value of the structure which should be checked against the size and shape of the lot and the orientation which is desired for the main rooms in order that natural features may be capitalized to their fullest extent. The space budget, however, is incomplete until all of the secondary buildings necessary as accessories to the resort have been studied, these buildings being such items as bath-houses, boat-houses, piers and landings, caddy-houses and other outlying structures serving one or another form of outdoor sport.

We now come to a consideration of the business aspects of the problem and here the analysis should be devoted to cost estimates carefully worked out in detail covering the following major points:

Investment, which includes the cost of the site, the cost of the buildings and all improvements to the grounds, including recreational equipment; the cost of architectural and engineering services, lost interest and other carrying charges during the period of development and construction; the cost of mortgages and other sources of funds and of legal expenses incidental thereto, and an item for miscellaneous contingencies which will give a margin of safety and protect the owner from finding himself financially embarrassed in event the estimates are inadequate. Furnishings and all equipment also belong under this heading.

Financing. This item will show the financial plan under which the building is being developed, showing the total investment divided into senior financing, which indicates the amount of the first mortgage; junior financing, which includes any second mortgage, debentures, notes or other short-term obligations, and the equity which includes the owner's investment or the funds to be derived through the issue and sale of stock.

Income. This part of the analysis will show the number of rooms of each type, the rates to be charged and the total gross income from rooms less an allowance for vacancies and a tabulation of all other secondary sources of income, such as from sub-rentals, concessions, garage facilities, and the like, with conservative estimates of the amounts to be derived from these sources.

Fixed Charges. This section of the analysis covers the interest and amortization requirements on all mortgage obligations, notes, and stock and an allowance for a depreciation reserve if the amortization of the mortgages is not rapid enough to take care of this factor.

Operating Costs. This item includes many sub-headings, including labor payrolls, heat, light and water, uniforms, supplies, food purchase and every other type of expenditure necessary for the conduct of the enterprise.

Working Capital. Under this heading should be an allowance for funds to open the hotel, cover all advertising and other initial expenses and provide for payrolls and other current expenditures until such time as the hotel earnings are adequate to create a reserve.

A careful analysis worked out along the lines above suggested, serves two purposes. It forms the basis for completing the financing by showing in tabular and written form the things which the banker must know before he is content to loan money for such an enterprise. Financing of resort hotels at best is a difficult procedure and the utmost conservatism must be shown if any substantial loans are anticipated from the usual mortgage sources. The other function of the analysis is to form the basis for the actual physical planning of the hotel. With this data in mind the architect can proceed directly to the development of his sketch studies and floor layouts with a certainty of arriving at a result closely in harmony with the desired scheme.

Examples of Resort Hotel Furnishing and Equipment Costs

Location of Hotel	No. of Rooms	Cost of Furnishings	Cost per Room	Cost of Food Service	Total Cost
Florida	381	\$179,079	\$ 521.54	\$19,633	\$198,712
Missouri	210	130,407	665.33	9,315	139,722
Mississippi	155	138,201	1,095.06	31,536	169,737
Cuba	110	38,865	409.68	7,200	45,065
Florida	100	49,031	562.96	7,265	56,296

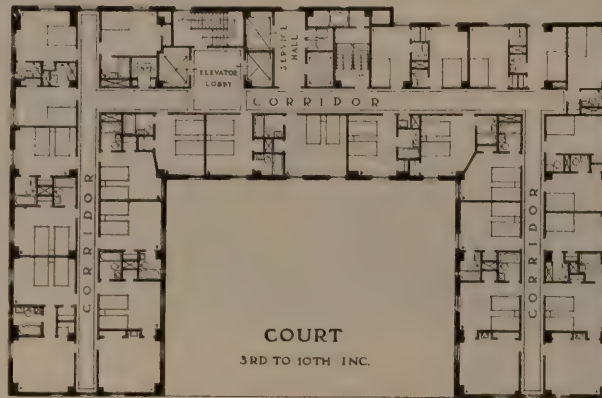
An Analysis of the Plans of the Half Moon Hotel, Coney Island, N. Y.

Geo. B. Post & Sons, Architects

THE plans of this hotel have been selected for a more detailed analysis because this represents the solution of the problem of providing high class hotel accommodations in a great popular seaside resort. This hotel, as illustrated on pages 138 and 159, was completed in 1927 as the newest addition to the "American" Hotels Chain. Its picturesque architecture is well demonstrated in the illustrations. Note, however, that combined with the interesting exterior and interiors of this hotel,

there is an extremely efficient plan layout. The site of this hotel in Coney Island represents very valuable land, and it would naturally be expected that stores would be incorporated along the boardwalk front. Stores of this type bring a very high rental, and there are seven in this building, which should certainly offset much of the operating cost.

The entrance lobby is kept small in order to save space for other purposes. An unusually large lunch room is provided because of the tremendous transient population during the summer months, and it is probable that considerable trade is drawn from other than hotel guests. For guests and those who require a more



Typical Floor Plan of the Half Moon Hotel (see page 138)

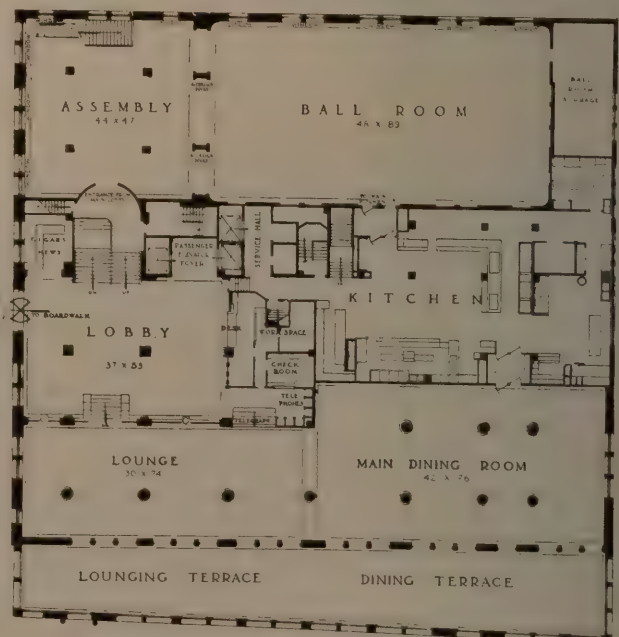
secluded restaurant, the attractive grill-room is available. Upstairs on the main floor, there is a large lobby and lounge and the main dining room, all opening on a lounging and dining terrace set well above the boardwalk and overlooking the ocean. It would be difficult to imagine a more attractive layout from the viewpoint of guest comfort. This floor also has an assembly hall and a large ballroom, which complete the extensive facilities for entertainment and service to the public.

The guest room floors, as shown in the typical floor plan herewith, are laid out in a U-shaped plan that is two rooms deep, with corridors running through the center. This plan surrounds a huge court, so that every room has the advantages of ample light and air. The rooms are of good size, there being four large corner suites on the front of the building and the balance of the floor containing 13 double rooms and 11 single rooms. Each room has a bath and all rooms are very attractively decorated and furnished.

The complete contract for the beautiful Furnishings of the Half Moon Hotel was executed by the PICK-BARTH Companies.



Ground Floor



Main Floor

Chapter IX

The Planning of Resort Hotels

If the written plan analysis has been worked out as suggested in the preceding chapter, the architect is equipped to proceed on a sound basis to the preparation of preliminary drawings into which the various plan units are logically correlated within a preestablished volume and general schematic arrangement. If the resort hotel happens to be one which is situated on a relatively large parcel of land which is to be developed with recreational facilities and to be improved with drives, planting, lawns and gardens, the real start on the drafting board must involve the preparation of a general plan for the property as a whole. This plan will show the exact position of the building and its general shape in relation to the contours of the land and in relation to the vistas and orientation which the important rooms are to enjoy.

The next problem is the choice of structural type for the building, it being presumed that the architectural style has already been determined upon. Most resort hotels of past years throughout the country have been of non-fireproof construction, but a number of holocausts in these inflammable and poorly protected buildings have turned the public strongly against such flimsy construction and have created a marked difference in rental values that may

be obtained from buildings of fireproof construction properly equipped with fire towers and stairways which assure safe egress for all tenants. Where cost considerations make fireproof construction prohibitive there should still be included as a prerequisite of the plan, a fireproof stairway enclosed in fire walls adequate to assure the safety of the guests at all times. Whether the fireproof structure be designed with a steel frame or a reinforced concrete frame or with masonry walls and skeleton steel girders, depends largely on local considerations, including the cost of transporting materials and the availability of workmen competent to undertake the construction chosen.

Proceeding with the development of the plan of the building itself, we find that in resort hotels the usual freedom of ground space allows an arrangement of the public and service areas in a logical plan which does not have to be bound necessarily within the limits established for the typical guest room floor. Frequently, of course, resort hotels are situated on very high priced land, as at Atlantic City and in other places of great popularity; in this event the lower floor plans generally cover the entire lot or a large percentage of it, and the bed room floors with their required column space have a

Check List of Functional Plan

Because of the great variation in the size and nature of resort and tourist hotels, the following check list of items to be considered in developing the functional plan are given only as an indication of the proper method:

I. ROOMS AND GUEST COTTAGES

1. Rooms for transient guests and tourists—compact size, mostly with complete baths, but more commodious and decorative than typical commercial hotel rooms.
2. Rooms for week-end and short-stay guests, similar to transient and tourists' rooms, except some in suites with connecting baths.
3. Rooms for season guests—commodious rooms, well

furnished and decorated, with private baths for single rooms and suites of two or three or more rooms with private and adjoining baths.

4. Guest cottages—living room with two to six bedrooms—occasionally with serving pantry.

All guest rooms should have good outlook, season guests having preferred position.

II. PUBLIC AND SEMI-PUBLIC SPACE

Entrance lobby and front office separate from lounge, of compact size with check room, porter's desk, news and cigar stand, usually telegraph and telephone room.

Lounge—commodious room with good outlook and large windows.

Writing room and library—compact size, good library equipment desirable.

Public Lavatories—rest rooms, etc. Small size for tourists only, men's in basement, women's room in mezzanine or second floor.

Dining room—Size depends on nature of resort. Frequently requires space to accommodate all guests at

once. Preferably smaller if dining habits permit two or three services of each meal.

Secondary dining facilities—Large resorts require Tea room and soda fountain and a few private dining rooms.

Ballroom for conventions and entertainment.

Closed porches, sun rooms, etc. Open and closed porches commanding best outlooks, usually of large size.

Barber shop and beauty parlor—required for isolated hotels—sometimes omitted in tourist hotels in important centers.

Sub-rental space—rarely required.

III. FOOD PREPARATION AND SERVICE

Kitchen equipped for American or European food service as desired. Size depending upon dining habits. Usually must be large enough to handle all guests at

one sitting for each meal.

Food storage facilities—extra size for isolated hotels.

IV. RECREATIONAL FACILITIES

Game rooms for cards, billiards, etc.

Bowling alleys, swimming pools, handball courts and other facilities for indoor entertainment as required by the nature of resort.

Exterior recreation facilities—golf course, tennis courts, bowling greens, bathing beach, skating rink, ski jumps and toboggan slide and accessory buildings.

V. GENERAL PLAN DATA FOR ARCHITECT

Construction: preferably fireproof or slow burning with ample fire escapes and fire walls.

Heating and power—Isolated plant, low pressure steam system or forced hot water circulation; live steam for kitchen. Power generation required only when

Public Service is lacking or irregular.

Elevators not required for buildings of three stories or less.

Accessory buildings: Garages, help's quarters, power plant, ice plant, pump house, water tank or reservoir.

marked influence on the arrangement of the public space, in fact of the entire first floor.

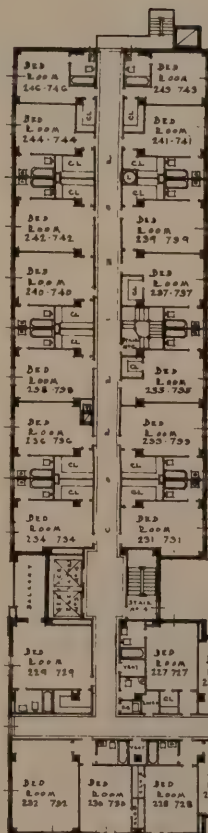
Assuming that the typical resort hotel occupies only a portion of the available land, the layout of the public space can be tentatively divorced from the problem of designing the room floor scheme; and this in a way is fortunate because in resort hotels there is likely to be a considerable volume of space needed to provide the desired facilities. Since the guests are almost invariably seeking rec-

reation, the hotel itself must provide for indoor entertainment for inclement weather and for evening festivities which generally involves the provision of card and billiard rooms, dance floors, lounges, libraries and writing rooms, and occasionally bowling alleys, swimming pools and other similar facilities such as might be found in a well-equipped country club. It is impossible in this brief space to indicate the proper relation of these several units one to the other as much will depend

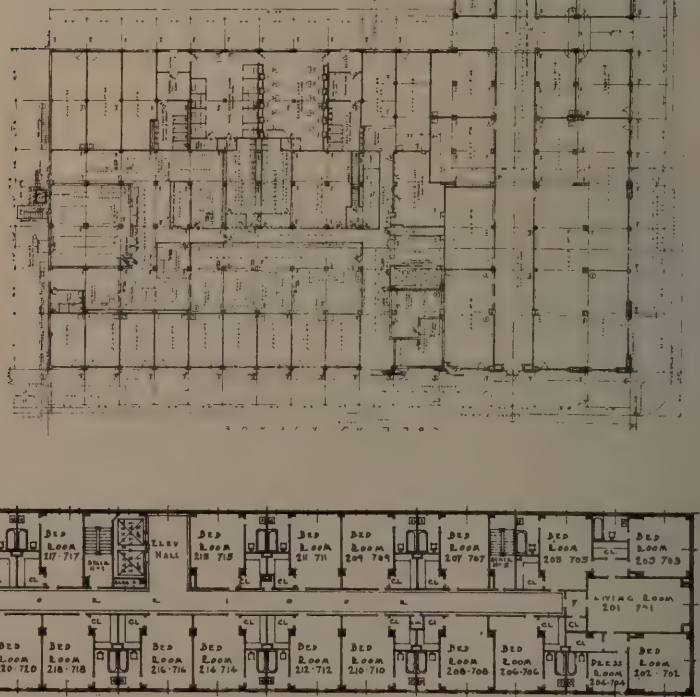
Floor Plans of the Roney Plaza

THIS is one of the largest of the Florida resort hotels, containing approximately 300 rooms, all with bath. The plan is of the type generally used for southern resort hotels, being arranged in long, narrow wings with central corridors to insure ample light and ventilation. The building is of concrete construction with exterior of stucco and stone. The ground floor is arranged with almost the entire space given over to sub-rentals, including stores and shops in a series of arcades.

The complete contract for the Furnishings and Equipment of the Roney Plaza was executed by the PICK-BARTH Companies.



Ground Floor Plan at Right



Typical Guest Room Floor Plan

upon the site and the nature of the resort. The important problem is to provide those facilities which will assure adequate patronage and will produce either directly or indirectly a sufficient income to warrant their cost and to combine them so efficiently as to require a minimum volume of building with consequent economy in the initial investment.

Resort hotels achieve much of their reputation on their dining facilities. They are so situated that the guest has no alternative but to take his meals at the hotel. Failure to provide good food and superior service will soon impair the success of the project to such a degree that it will take years of effort by a better management to recover for the hotel a good name and a broad reputation. For this reason special attention must be devoted to the layout of the dining facilities and the kitchen and food service areas and on this problem the facilities of the Pick-Barth organization are available to relieve the designer of a vast amount of research which would otherwise be necessary to equip him to properly incorporate in his plans the needed facilities. There is a peculiar character to the dining problem in resort hotels. To a surprising degree the guests act like a large family, coming to their meals at fairly definite hours, so that the service of a complete meal is spread over a relatively short period of time. This generally means that



Lounge in the Roney Plaza

the dining room must be adequate in size to seat a fairly large percentage of the guests at one time. In the smaller resort hotels it is even necessary to seat all of the guests at once, because this family habit is more easily developed in a small group of guests than in the hotels catering to a greater number of people of diversified habits. The same consideration requires that the kitchen be so equipped



The Roney Plaza, Miami Beach, Fla.
Schultze & Weaver, Architects

Manatee River Hotel

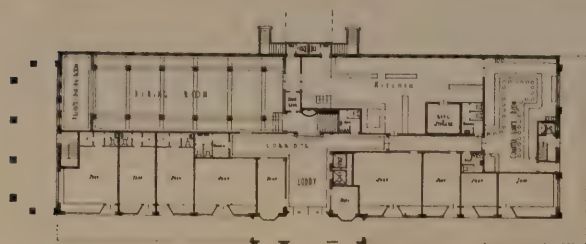
Bradentown,
Florida

J. Harold MacDowell, Architect



THIS building is of the apartment type, as will be seen, more than a hotel, and contains approximately 160 suites with all hotel facilities to make it an up-to-date hotel building. Each suite has a bath and door bed with dressing closet. The cost of this building was about 55 cents per cubic foot. The building rests on pile foundations and is constructed of reinforced concrete frame with tile floor slabs, tile exterior walls and stucco. Connecting this hotel with the old three story building is a bridge from the office floor level and between the two buildings the court is laid out in the Spanish patio style. It is interesting to observe how the use of Disappearing Beds has made the guest rooms serve the double purpose of bedrooms and living rooms, a feature as desirable in a resort as in an apartment hotel.

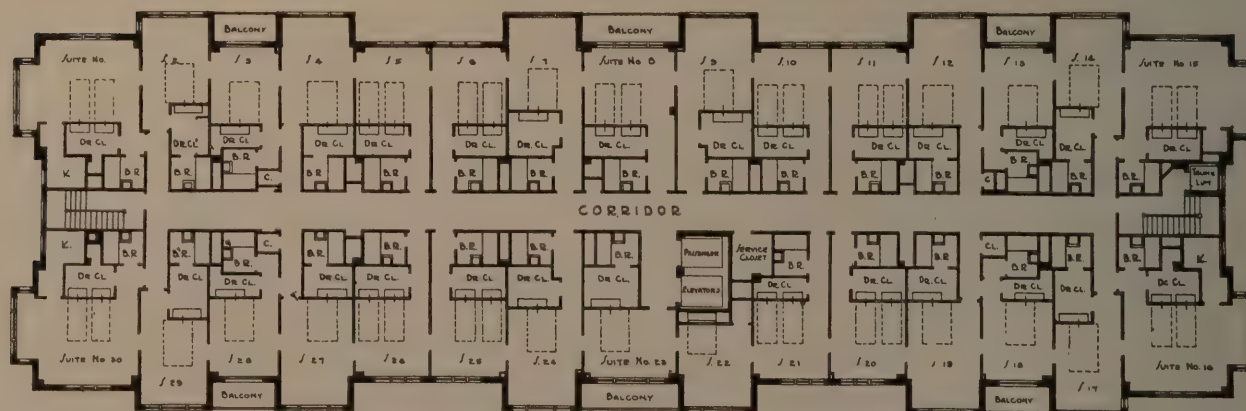
The complete contract for the Furnishings and Equipment of the Manatee River Hotel was executed by the PICK-BARTH Companies, and the Disappearing Beds and Space Saving Equipment were installed by the affiliated concern, The "White" Door Bed Company.



First Floor Plan



Second Floor Plan



Typical Floor Plan

The typical floor plan above indicates how apartments are laid out under the efficiency type of planning. Note how the dressing closet is arranged in a compact unit with the bathrooms. In many instances, the entrance to the bathroom is arranged directly through the dressing room. Most of these apartments are not equipped for food service.

as to permit rapid and efficient service for an entire meal at once. Food must be prepared in large quantities as there is relatively a small volume of short order work. When *a la carte* service is offered, as is generally demanded of the more expensive resort hotels, the kitchen problem is even more complicated than when the American plan with its *table d'hôte* meals prevails. The Pick-Barth organization has the benefit of the experience of direct contact with many thousands of hotels and there is doubtless no other source in the country where such complete and accurate information is available for the determination of correct food service equipment and space requirements.

Returning to the problem of guest room planning, it becomes at once apparent from checking over the typical analysis that the resort hotel must combine a wider variety of units than is to be encountered in other types of hotels. This is true at least for the resort hotel which encounters a considerable proportion of transient trade in conjunction with the seasonal guest, but it is not so important in the smaller resort hotels which are designed primarily for the vacationist who is planning to spend at least a week at a time.

Transient business requires room units similar in type to those of city transient hotels with the exception that very small rooms are not tolerated by the average guest. There must be a measure of distinction, charm and comfort in these rooms functioning as temporary homes for travelers, for they come to the resort hotel rather than to the commercial hotel in a spirit of pleasure and recreation and they do not accept facilities which resemble too closely the commercial hostelry. The next group

of guests are those who stay for week-ends or for a short vacation period. In physical layout these rooms do not vary markedly from those offered the transient guest, for the reason that people who intend to stop for any period of time soon get acquainted with the facilities offered in the public rooms and remain less in the seclusion of their quarters than the strangers who come more without an opportunity for extending their acquaintances. Hence rooms of comfortable size equipped to provide normal comforts of the home are adequate and the planning problem resolves itself simply into the provision of adequate space areas rather than in the development of special features. The matter of furnishings, however, requires that there be more than the usual number of comfortable chairs and tables for converting the bedroom space to living room uses.

The seasonal guest may demand more extensive quarters, often requiring suites, two or three rooms or more, at least one of which may serve as a private living room. In certain types of resort hotels there is an opportunity to develop the use of these living rooms by the provision of door beds and dressing closets, which permits the conversion of the living room to a bedroom without the expense to the guest of hiring an extra room for intermittent guests or extra members of the party. The same provision enables the hotel manager to offer a single room which may function as a living room by day and a bed room by night, a happy solution of the requirements of the seasonal guest who cannot afford extensive space but who desires the privacy and comfort of a day-time living room.

The question of interior finish is a broad one,



Hotel Pancoast, Miami Beach, Fla.
Martin L. Hampton Associates, Architects

Examples of Construction Costs

6 Typical Resort Hotels

Location	Date	No. Rooms	Building Cost	Cost Per Cu. Ft.	Cost Per Room
Florida (East Coast).....	1926	250	\$1,025,000	.78	\$4,100
Florida (East Coast).....	1925	128 Apts.	800,000	.65	Apartments—no per room basis
Florida (West Coast).....	1925	388	1,241,600	.42	\$3,200
California	1926	260	728,000	.46	\$2,800
New Jersey	1926	280	1,120,000	.68	\$4,700
Arkansas	1925	500	2,000,000	.50	\$4,000

Construction Cost Details on a Modern Resort Hotel

228 Rooms. Total Cost \$952,000. Per Room \$4,175.

178 Rooms with bath—30 Rooms with shower—20 with bath and dressing room.

Average Room Size 11'x15'.

Concrete Frame and Floors—Fireproof; 3 Passenger 1 Service Elevator; Ballroom, main and club dining room; 10 stores; spacious lobby; lounge; cafeteria; good interior finish throughout.

Detailed Construction Costs

Item	Cost	Percent	Cubic Foot Cost
Excavation	\$ 7,300	.008	.005
Masonry	112,900	.128	.078
Carpentry & Millwork.....	78,500	.088	.054
Ornat. & Misc. Iron.....	23,000	.026	.016
Floor Finish	71,200	.081	.049
Plaster & Stucco.....	60,000	.068	.042
Painting	10,000	.011	.007
Roofing & Sheet Metal.....	11,200	.013	.008
Concrete Frame	181,000	.207	.126
Plumbing	93,500	.106	.065
Heating & Ventilating.....	50,400	.057	.035
Wiring & Fixtures.....	25,000	.028	.017
Elevators & Doors.....	38,600	.044	.027
Metal Trim & Sash.....	20,800	.024	.014
Allowances	45,000	.060	.031
Insurance	52,600	.051	.037
Totals	*881,000	1.000	.611

* NOTE: Architects' Fees and Financing brought total cost to \$952,000.

Dallas Park Apartment Hotel

Miami Beach,
Florida

*Robertson & Patterson,
Architects*

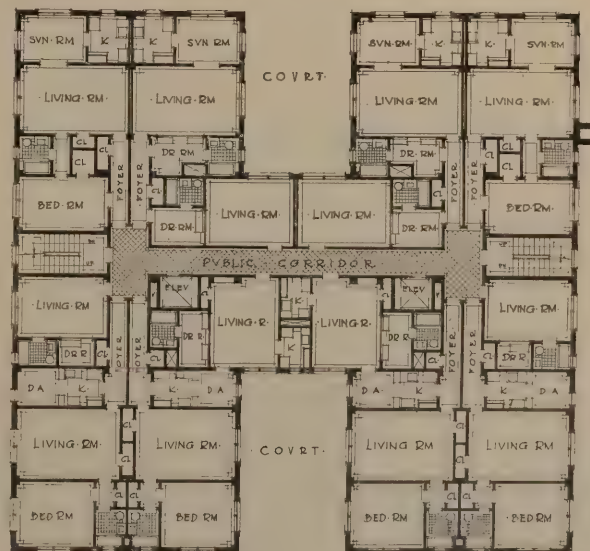
AN example of the type of Resort Hotel planned along much the same lines as a regular Apartment Hotel. It is a fireproof hotel of reinforced concrete frame construction with walls of interlocking hollow tile and having an exterior of tinted stucco and composition stone trim. The building covers a ground area of one hundred feet by one hundred and four feet. There is a total of one hundred and twenty-eight apartments. The eleventh floor contains a complete bungalow as well as a number of servants' rooms.

The building was completed in January, 1925, at a cost of \$800,000, exclusive of furniture and land value. Cost per cubic foot was 65 cents.

The complete contract for the Furnishings of the Dallas Park Apartment Hotel was executed by the PICK-BARTH Companies.



GROUND FLOOR PLAN
THE DALLAS PARK APARTMENTS
MIAMI, FLORIDA
R. L. ROBERTSON & L. R. PATTERSON, ARCHITECTS
MIAMI



TYPICAL FLOOR PLAN
THE DALLAS PARK APARTMENTS
MIAMI, FLORIDA
R. L. ROBERTSON & L. R. PATTERSON, ARCHITECTS
MIAMI

for resort hotels range in style through the entire circle of architectural schemes, from the extremely rustic structure suitable for the remote resorts in undeveloped countries to the highly sophisticated types demanded at the select watering places. The choice of style cannot be discussed here to any great point beyond calling attention to the fact that comfort must not be sacrificed to the consistent development of a stylistic scheme carried into the guest rooms. From the point of good housekeeping and the maintenance of cleanliness, it is important that the interior finish be selected with the same care for resort hotels as is exercised in the development of other types of buildings which have been briefly discussed.

There is one aspect of resort hotel development that is quite unique. It is that the expansion of the hotel facilities may quite readily take the form of separate buildings related to the main structure by means of enclosed ground floor corridors or porches or even entirely divorced from the main building to take the form of separate cottages which contain a common living room and several guest rooms, but not dining or other service facilities. Some resorts find a very profitable source of income through the provision of individual cottages which can be rented by a family, giving the tenant seclusion and private accommodations comparable to the ownership of their own camp. Service is rendered in these cottages by the hotel staff and the guests take their meals in the main dining room, so that there is no burden of housekeeping imposed on these cottage tenants as would be the case if they attempted operating their own establishment. Such buildings may be developed in a variety of styles, but, of course, if closely associated with the main hotel structure should be harmonious in character.

In view of the growing popularity of this type of accommodations for the seasonal guest, special attention should be given to the dining facilities in the main building, to permit the maintenance of adequate food service as the hotel colony is increased in size through the development of these new units.

The typical resort hotel project often involves one further stage of planning and construction, which is the development of recreational buildings and facilities of a wide range of types. Among the structures which may come into this classification are piers and landings, boat houses, bath houses, indoor or outdoor swimming pools, golf club houses and caddie quarters, garages, shooting boxes, and occasionally outlying camps for the accommodations of winter sports or for those who wish to take overnight hikes to surrounding points of interest, where such facilities must be provided by the hotel management.

In addition to these buildings for recreational purposes the hotel project may properly include within its budget items sufficient to provide for the construction of golf courses, tennis courts, bowling greens, croquet grounds, bridle paths, toboggan slides, ski jumps, and other features of interest to sportsmen of varying degrees of activity. If such facilities are attempted it must be remembered that half-way measures are of little avail—the golf enthusiast demands a measure of perfection in the golf course, the tennis player is not satisfied with a mediocre court, and the winter sport lovers are dissatisfied unless they can find in the ski jumps, toboggan slides or bobsled runs a real thrill. Compared with the results which these things achieve in creating popularity for the resort hotel and maintaining a full house throughout the entire season, they are relatively inexpensive and through various fees and charges are in a measure self-supporting.

Examples of Resort Hotel Construction Costs

Following are examples of construction costs which give a brief outline of the type of structure, the year of construction and number of rooms, and the total cubic and per room costs.

Type of Structure	Built in Year	No. of Rooms	Cost of Building	Cost Cu. Ft.	Cost Per Room
13 story fireproof reinforced concrete tile walls with stucco, 240 baths, no basement, all mechanical equipment above ground.	Florida 1926	250	\$1,025,000	78c	\$4,100
8 story with 7 story wings reinforced concrete, face brick exterior with stone trim, about 260 baths, full basement.	Arkansas 1926	501	\$2,000,000	50c	4,000
7 story and full basement reinforced concrete, hollow tile walls, stucco exterior. 270 baths.	Florida 1926	388	\$1,100,000	38c	\$3,000
5 story and basement, reinforced concrete, 210 bathrooms, full equipment, stucco exterior on hollow tile walls.	Mississippi 1925	310	\$1,000,000	52c	\$3,225
4 story reinforced concrete, hollow tile walls with stucco exterior, 60 baths.	Mississippi 1924	120	\$400,000	58c	\$3,300
4 story fireproof, reinforced concrete hollow tile walls, stucco; 84 baths, several wings in plan.	Florida 1925	125	\$385,000	60c	\$3,000

The above figures were obtained from actual projects, so that they may serve to establish some idea of the range of costs in resort hotel construction. The great variation in cubic foot cost is primarily due to a difference in specifications which in some instances are very simple and in others very elaborate.

Examples of Resort Hotel Architecture

The Kitchen and Food Service divisions of these hotels were planned and equipped by the PICK-BARTH Companies, all of them except the Edgewater Gulf Hotel being handled by the affiliated organization, The John Van Range Company.



Hotel Tampa Terrace, Tampa, Fla.
Hentz, Reid & Adler, Architects



Hotel Greenbrier, White Sulphur Springs, W. Va.
Frederick Sterner, Architect



Hotel San Carlos, Pensacola, Fla.
Emile Weil, Inc., and W. D. Willis, Assoc. Architects



Edgewater Gulf Hotel, Gulfport, Miss.
Benjamin H. Marshall, Architect



Hotel Seminole, Jacksonville, Fla.
H. J. Klutho, Architect



Forest Hills Ricker Hotel, Augusta, Ga.
Willis Irvin and Pringle & Smith, Assoc. Architects



The Don Ce-Sar, Pass-a-Grille, Florida, Henry L. Taylor, Architect

Chapter X

The Architecture of Resort Hotels

There are two phases of the architecture of resort hotels, which have undergone a considerable change within the past few years. These are, first, the selection of materials in which to express the architectural design, and, second, a tendency toward the more romantic styles or the frank assumption of a commercial hotel type of exterior. Some of the great resorts of this country have developed to a point where they are really cities of at least second magnitude. Atlantic City is one of these and they are to be found also in Florida, the Carolinas, and at other points where an unusually large number of people congregate at certain periods of the year.

It is natural, therefore, that a hotel's functions in such resorts may not be necessarily confined to catering to the demands of pleasure and health seekers. The new hotel may of necessity be created to meet the requirements of businessmen and commercial travelers as well as tourists. If the hotel is constructed in or near the business section, or in a well developed residential district, it may quite possibly take on commercial lines rather than to assume the far flung perimeters and low lines of the typical resort hotel.

The discussion of the architectural design of com-

mercial hotels which is presented in another section of this book will serve to bring out the points necessary for this general type of resort hotel. Therefore, this discussion can be limited to the architecture of typical resort hotels and should also bring in the so-called tourist hotel, which is the result of the great increase in motor traffic and which often takes on some of the character of the resort hotel.

For resort and tourist hotels, it is apparent that good architecture plays an absolutely dominating role in the creation of a building which will house success or failure, all in accordance with its attractiveness and the service rendered. This type of building must be inherently self-advertising. It must intrigue and sustain interest—it must be true in type for the climatic conditions and consistent not only with the natural environs but with local tradition and sentiment. It is in the effort to maintain a relationship of ideas that the designers of the most successful hotels of this

kind find their inspirations in the pleasurable watering places, mountain resorts and roadside inns of England and the picturesque countries of the Mediterranean, or the traditional hostelries of the American Colonies.



Tower of the Half Moon Hotel at Night



Mediterranean Architecture is popular at almost any Resort
Buena Vista Hotel, Biloxi, Miss.
Carl E. Matthes, Architect

Architectural design naturally bears a direct relationship with the functional purpose for which the building is developed. Therefore, we may naturally expect to find a difference in the designs adapted for tourist and for resort hotels. The tourist hotel is primarily a place of short residence, while one stops over between the laps of a journey. The resort hotel represents longer period rentals to guests who usually stay one week and sometimes an entire season. The resort hotel, therefore, will probably be designed in spacious grounds and in some location where the design should be related to the vistas of natural beauty in character not only as to physical environment but for climatic and traditional conditions.

It is evident, therefore, that the tourist hotel will probably be located in a small town, particularly one of attractive appearance or romantic appeal and it is not necessary that such a hotel be built on a large tract of land—in fact, quite often it will be located in a congested section convenient to motor traffic and in plain sight of those who in passing might be induced to remain for the night or stop for meals.

The greatest criticism that can be made of most recent tourist hotels and many resort hotels is that they are not attractively designed—they do not arouse curiosity, and it is probable that because of this lack, half of their potential business passes by without a second glance.

It would seem almost axiomatic that a tourist ho-

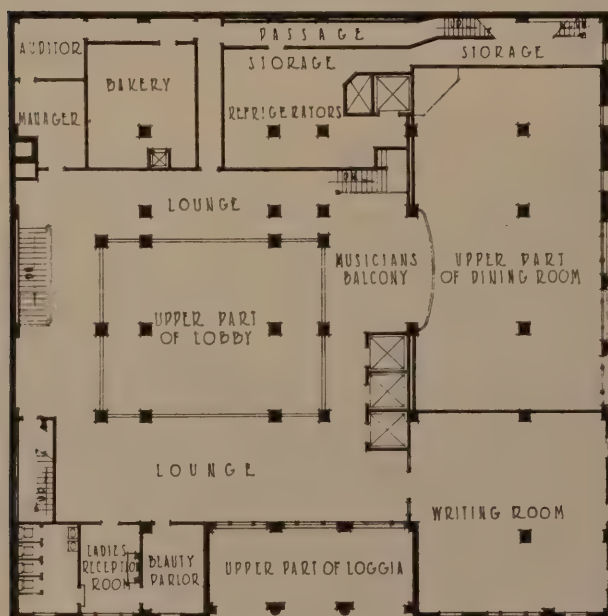


Stairway to the Isabella Lounge, Half Moon Hotel, Coney Island, N. Y.

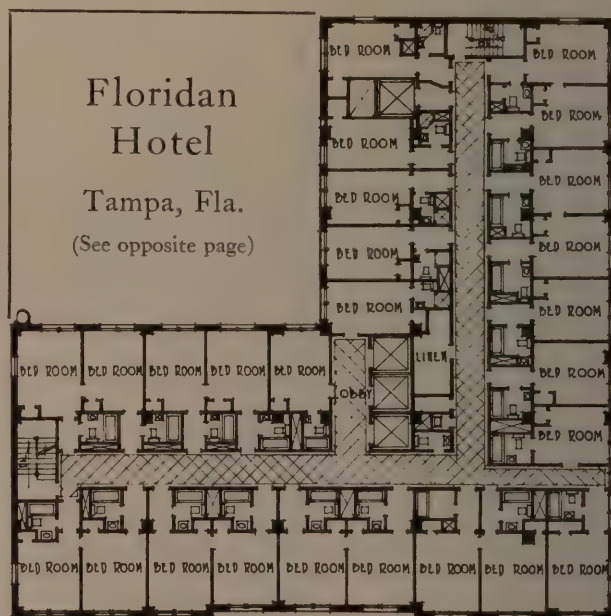
tel designed in some intriguing architectural style would of necessity be successful from the day of its opening, provided, of course, that the standards of service were kept up to the expectations aroused by the exterior. The elements of good design in the various types of architecture suitable for resort and tourist hotels are too complex for serious discussion here. The hotel man's insurance of good design is to get a good architect and pay his price. Skimping on architects' fees is the worst form of false economy.

Aside from the lines and proportion of the building, the exterior surfacing of walls and roof of the tourist hotel play the most important part in its structural success and that of its appearance. In considering exterior materials, we may immediately eliminate wood, although for the Colonial types it is a natural and economical material, but the danger of fire and the cost of painting has doomed the wood exterior for this field.

For the Mediterranean types (Spanish and Italian), which are used primarily at watering places Northern or Southern, the exteriors will be almost invariably of stucco made with portland cement. With this plastic material innumerable textures and color tones are available. Experience has brought out important points in this relationship. Do not attempt, or allow the architect to attempt, any complicated textures. There are but few really experienced stucco craftsmen in this country and simplicity is the best insurance of a good job. The best wall of



Mezzanine Floor



Typical Floor

this kind is constructed by applying three coats of stucco over walls of hollow clay tile, hollow concrete building block, or over solid brick walls. Sample panels of the stucco should be laid up and inspected by the owner and the architect for texture and color before the work proceeds. Good stucco work is dependable and lasting and will not crack if well applied.

For the French and English types of buildings, the walls will be constructed or surfaced with brick, stucco, or stone if it is natural to the locality. Face brick is, of course, an excellent material, everlasting and growing more beautiful with age. A wide range of colors is offered—buffs, greys, reds and heather mixtures. Common brick is also being used for exterior walls, a good decorative effect being obtainable by employing what is known as skintled brickwork—that is, the selection of warped and overburned brick which are laid up in rough texture with wide careless mortar joints, resulting in a pleasing appearance and often in considerable economy.

For the Colonial types, there are, of course, exteriors of painted wood siding or shingles—but these have their drawbacks as already explained. The



Hotel Floridan, Tampa, Fla.
Francis J. Kennard & Son, Architects

more practical surfacing is face brick, or, if a white effect is desired, common brick may be used and painted white to ultimately weather in a picturesque and typical effect.

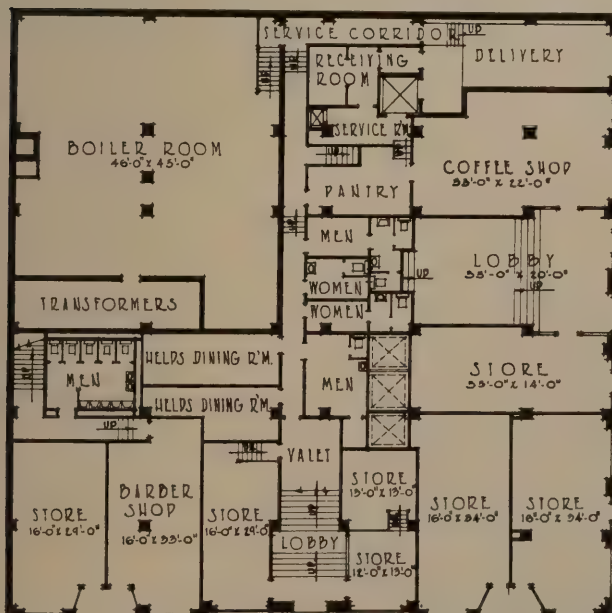
The various architectural styles logical for resort and tourist hotels in themselves usually call for certain types of roof. For instance, for the early English styles, the roofing will be of flat clay shingles, slate, or asbestos cement shingles in soft pleasing color mixtures and giving a rough texture. French styles usually call for smoother textures in the roof, while the Mediterranean (Spanish and Italian) styles almost invariably demand clay tile, often of the Mission type (curved tile).

Very often the exterior architecture of the resort hotel will follow one

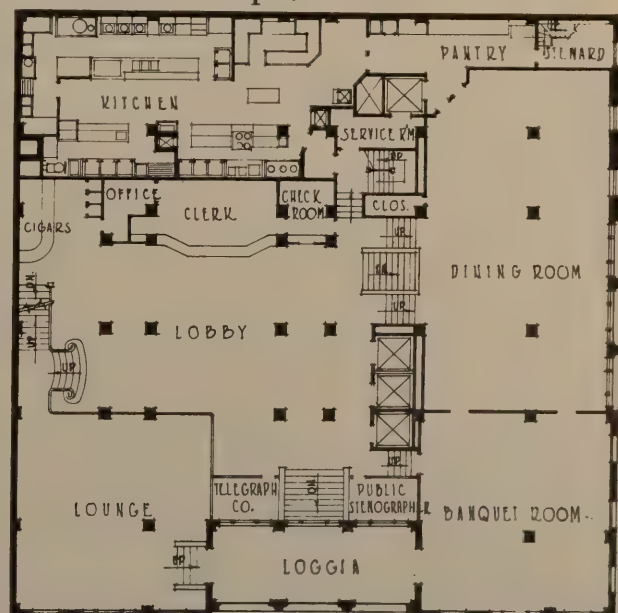
of the early English styles, requiring what is known as half timber work.

Windows are extremely important components of the exterior architectural design. Invariably the style of architecture will dictate the general style of the window. For instance, in the old English style, casements were invariably used and today we find casement windows still employed by architects because of their attractive appearance.

Plans of the Hotel Floridan, Tampa, Fla.



Ground Floor



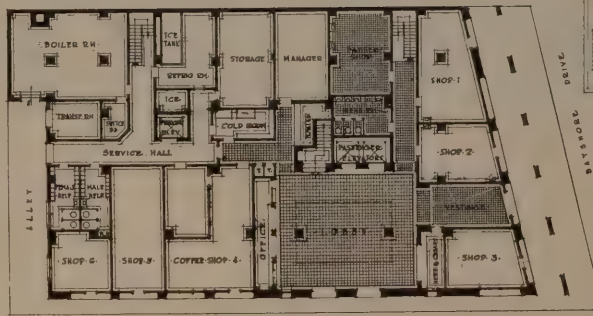
Main Floor



The complete Furnishings of the Alcazar were supplied by the PICK-BARTH Companies.



TYPICAL FLOOR PLAN



GROUND FLOOR PLAN



SECOND FLOOR PLAN

Hotel Alcazar, Miami, Fla.

Robertson & Patterson, Architects

THIS hotel is thirteen stories high, of fireproof construction with frame of reinforced concrete and walls of interlocking hollow tile. Exterior is stucco with composition stone trimmings.

The first floor contains a lobby, coffee shop, five small shops, and rooms for mechanical equipment. There is no basement and all mechanical equipment for the steam heating plant and hot water system, etc., is above grade.

Second floor contains a large lounge with awning covered balcony opening directly off this lounge, from

which an unobstructed view of Biscayne Bay is obtained. Dining room and kitchen are also on this floor.

The typical floors, of which there are ten, contain two hundred and fifty bedrooms and two hundred and forty baths, there being one two-room suite on each floor.

Total cost of building, exclusive of furniture and land, \$1,025,000.00. Cost per cubic foot 78c. Cost per room \$4100.00. Building was completed in February, 1926.



The Don Ce-Sar, Pass-a-Grille, Florida

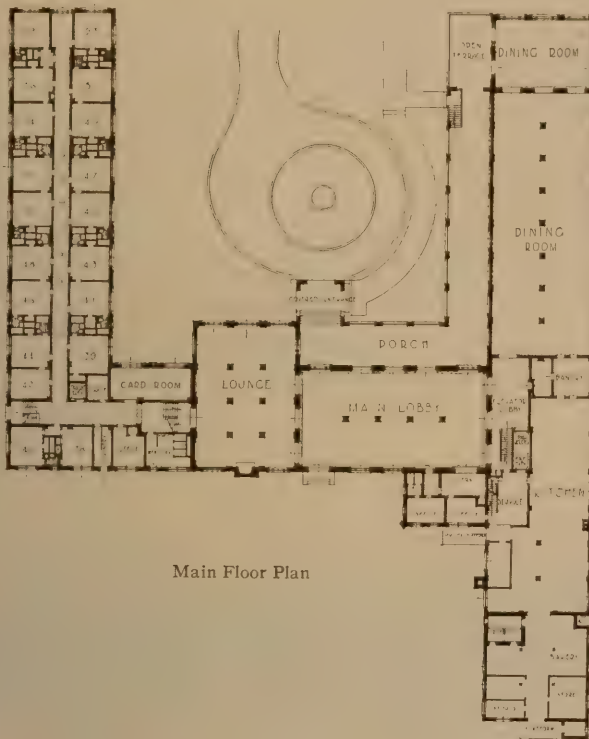
A GROUP OF TYPICAL MODERN RESORT HOTELS

FOLLOWING WILL BE FOUND
PLANS AND ILLUSTRATIONS
OF THREE OUTSTANDING
AMERICAN HOTELS OF
THE RECREATIONAL TYPE

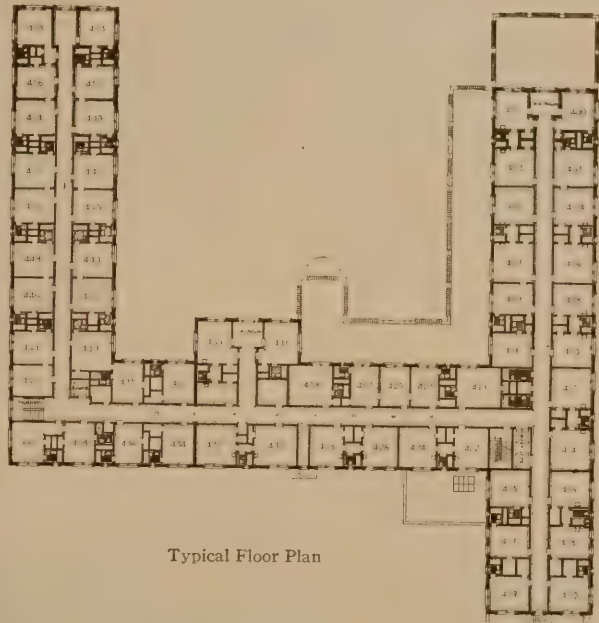




Buena Vista Hotel, Biloxi, Mississippi



Main Floor Plan



Typical Floor Plan

Buena Vista Hotel

Biloxi, Miss.

Carl E. Matthes, Architect

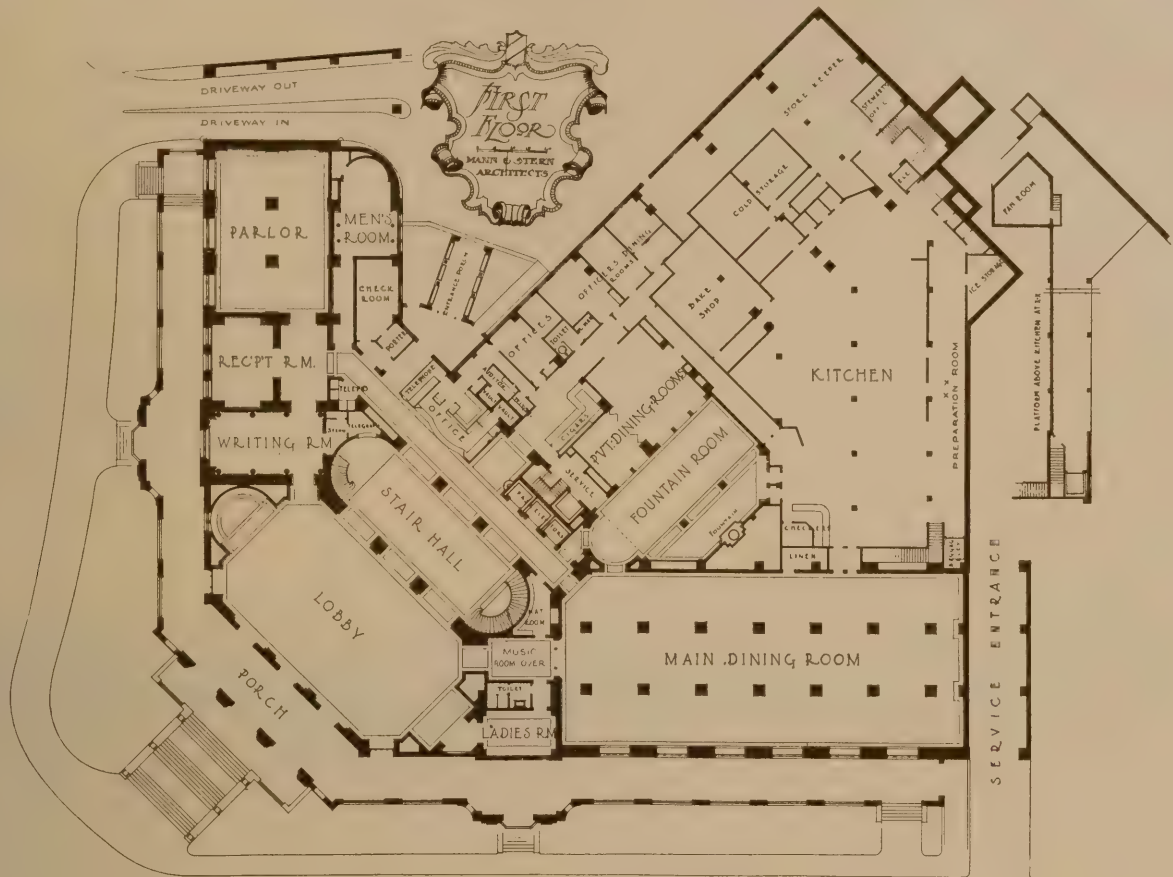
THIS is a four story structure of reinforced concrete and hollow tile construction. It contains 120 rooms, 60 of which have private baths. The architecture is of modified Spanish Mission style suitable to the environment. The exterior is of white stucco with cream colored trimmings. Total investment in this building is approximately \$450,000.

The plan is laid out in a manner which provides excellent light and ventilation and should meet climatic conditions in a very efficient manner. The main floor features include an extensive lounge which has both front and rear exposures. This lounge is located directly adjacent to the main lobby and both rooms open on a large porch which flanks the central entrance court. The office is well arranged to control both lobby and kitchen functions. The dining room has been planned with full exposures on both sides. An interesting feature is the broad porch which runs the entire length of the dining room, ending in a small open terrace. The typical floor plan has been designed with bath between rooms and with individual room and bath units so arranged that suites can be established easily. Corridors have been kept open at the ends to provide additional ventilation. At least two of the corridors terminate in sun parlors, which are convenient for guests who do not wish to go down to the main lounge.

The complete contract for the Furnishings and Equipment of the Buena Vista was executed by the PICK-BARTH Companies.



Arlington Hotel, Hot Springs, Arkansas—Mann & Stern, Architects

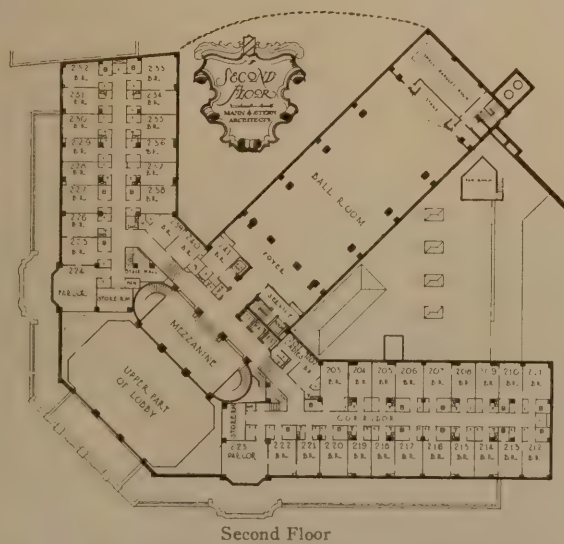


Arlington Hotel, Hot Springs, Ark.

Mann & Stern, Architects

THE exterior of this hotel is shown on the opposite page. It contains 501 guest rooms and a large, completely modern medicinal bath-house. The rooms average 15 by 18 feet. The building is of reinforced concrete with gray face brick exterior.

The Arlington Hotel Kitchen was Equipped by PICK-BARTH Engineers.



Second Floor



Typical Floor

The Bon Air Vanderbilt

Augusta, Georgia

Plans for original building by McKim, Mead & White
Plans for addition by Warren & Wetmore

ON this and the opposite page are shown illustrations and the typical floor plan of one of the large resort hotels of the South. The Bon Air Vanderbilt as originally constructed from the plans of McKim, Mead & White is shown in the upper picture at the left. The lower illustration shows the building after alterations and additions had been made from plans by Warren & Wetmore. This hotel is laid out in the elongated style favored by southern resort hotels, and providing a full measure of light and ventilation for all rooms. All rooms are provided with bath, and the average size of rooms ranges from 9 to 15 feet by 16 to 18 feet. The hotel carries the usual complement of large restaurants, lounges, sun-rooms, and other service features necessary for the operation of a high class resort hotel. The general construction of the building is of concrete and hollow tile with exterior of stucco.



Main Entrance of the Bon Air Vanderbilt

The complete Furnishing and Equipping of the Bon Air Vanderbilt was handled by the Hotel Specialists and Engineers of the PICK-BARTH Companies.



Typical Floor Plan



The Bon Air Vanderbilt as Originally Constructed
McKim, Mead & White, Architects



The Bon Air Vanderbilt with Alterations and Additions
Plans for Addition by Warren & Wetmore, Architects



Exterior before Remodeling

Hotel Lincoln Lincoln, Neb.

Remodeled from plans by
H. L. Stevens & Co., Architects

These illustrations indicate how much the appearance of an old hotel can be improved by very simple remodeling. In this case the exterior of the building was cleaned; the old balconies were removed, and other minor improvements were made. This restriction of exterior remodeling allows funds for interior work where it is usually more greatly needed.



Exterior of Hotel Lincoln after Remodeling

Chapter XI

Remodeling Hotels For Increased Profits

The completion of a new hotel in almost any community introduces a factor of obsolescence in practically all of the existing hotel structures. As the process repeats itself, the hotels that have been in existence for the greatest length of time feel the influence of this obsolescence factor to the greatest extent because the typical public demand is for modern hotel accommodations.

Thousands of hotels throughout the country are suffering from lack of sufficient income simply because the buildings themselves have not kept pace with modern trends in hotel accommodations even though the service may be of the best. The total loss of revenue, due to this situation, is enormous; the opportunities for recovering this loss through modernizing existing hotel structures are even greater.

In spite of a general impression to the contrary, the remodeling of an existing hotel building frequently produces a higher return on the investment than the construction of a new hostelry. There are several reasons which bring about this condition. In the first place, the older hotels represent a lower

value for the volume of building available than new structures, partly because they were built under lower cost conditions; partly because they have written off a large proportion of their value through depreciation; and largely because they are situated on land which represents a materially lower investment than would be required to purchase in the open market a suitable site for a new building. Another and most important factor is that remodeling and modernizing of existing hotel buildings can often be undertaken at relatively low cost. These factors, taken together, give to the hotel owner an opportunity for retrieving much of his lost business through offering modern hotel accommodations at standard or below standard room rates with a larger profit margin than accrues to the competitor who has recently opened a modern building constructed under present-day costs.

Obsolescence is constantly taking place in all hotel buildings whether or not new competition becomes a factor in the situation and emphasizes the lack of modernity in the existing hotels. It is safe to say that the average hotel building over ten years



Egyptian Room in the Hotel Lincoln, Lincoln, Neb.

Practically all of the furnishings and equipment for the remodeled Hotel Lincoln were supplied by the PICK-BARTH Companies. Several small dining rooms similar to the above were especially designed and decorated by PICK-BARTH interior decorators.



Lobby of the Hotel Lincoln before (left) and after Remodeling

old would profit through a certain amount of remodeling work designed to bring its accommodation and service facilities in line with present-day standards. It is quite natural that the hotel owner finds it difficult to appreciate the changes which time works in his building. Daily contact with his own building so accustoms him to its arrangements, decoration and facilities that he seldom realizes that his building is growing old until some new structure is erected nearby which is in sharp contrast with his present structure.

Hotel owners are missing many opportunities for increasing their profits, for holding their position of dominance in their community, and for deferring the introduction of new competition in the form of new buildings by this tendency to let their own buildings become inefficient. Hundreds of new hotels are promoted every year throughout the country where they have no justification so far as total room accommodations are concerned simply because the existing hotels fail to offer the quality of accommodations which the traveling public is demanding.

The First Step in Remodeling

The proper method of approaching a hotel remodeling project is closely parallel to that outlined in other chapters in connection with the development of new hotel operations. The first step invariably is to make a correct survey of the local situation with respect to competition, potential business, changing type of patronage, type of accommodations demanded, room rates which are logical. The survey should be made as impartially as possible, preferably by an outside expert who can examine the situation from a fresh and unbiased viewpoint. The survey should continue throughout the preliminary stages as new facts are gathered and no commitments made until a complete picture of the economic situation resulting from the proposed remodeling operation can be obtained. (See Page 175.)

The first stage of the investigation having been completed and a fairly definite idea gathered as to the type of facilities or accommodations which are required to constitute modern hotel accommodations in a community, the next step involving studies of

the existing building itself is undertaken. The present hotel should be subjected to a critical examination with a view to determining the opportunities for profitable remodeling in line with the general ideas developed in the preliminary investigation. Some of the important points to be considered in examining the present building are covered in the following paragraphs.

Reducing Non-Income Space

Most old hotels have a great excess of non-income producing space in lobbies, dining-rooms, corridors and often in the guest rooms themselves which can be converted by remodeling to produce a substantial increase in income. Few old hotels take advantage of their street frontages to obtain the high rental values accruing to shops and stores. Very often lobby space can be sacrificed or dining rooms which are not used to capacity can be reduced in size to permit the introduction of small stores having outside entrances which will pay a substantial income.

Within the building, it may be possible to introduce new concessions such as beauty shops, barber shops, florist stands or theater agency, further converting non-income producing space into tangible assets.

Particular attention should be given to the opportunities for converting present guest rooms with or without baths to rooms with baths. In the older hotels this can very often be done without important structural changes because of the excessive size of the old-fashioned bedroom.

Private dining rooms, banquet halls, ballrooms and other entertainment space which does not pay may frequently be profitably converted to additional guest room space.

In the back of the house study should be given to the possibility of revising the food service space to increase its utility, eliminate waste space and possibly to introduce new types of food service such as lunch room or soda parlors which are not at present in operation.

This part of the work will indicate the extent of planned changes desirable within the building. The next matter to consider is the physical condition of the structure in order to establish the probable cost

of making the necessary changes and bringing the building into suitable condition throughout. In order to undertake any remodeling work, it will be necessary to have complete working drawings or measurements of the entire structure. An engineer or architect should prepare a report on the present structural condition of the building to determine if it is sound enough to warrant remodeling.

Problems of Mechanical Equipment

The mechanical equipment should likewise be carefully examined. Among the factors to be considered under this heading are the following:

If bath rooms are to be added, is the present water supply adequate for the purpose and will the sewerage disposal system or sewer connections take care of the additional load?

Is the present plumbing system, particularly the piping in good condition?

Will the introduction of new piping be feasible in view of the present location of masonry bearing walls, steel columns, girders, etc.?

The existing heating system should similarly be examined by a competent expert to establish its present condition and to determine whether or not it can carry any new load to be imposed for improved heating or for steam, for kitchen equipment and hot water for additional bath rooms.

The elevator equipment should be examined as to the necessity for increasing its capacity through higher speed operation or the introduction of new shafts for both passenger and service uses.

Architectural Appearance

Attention should next be turned to the architectural appearance of the building. If the exterior is not attractive or appears to be too old fashioned to attract favorable consideration of prospective guests, estimate should be made covering the cost of feasible architectural changes, the cleaning of exterior masonry, the replacement of defective exterior metalwork, the reconstruction of entrances or store fronts and painting.

Inside of the building study should be prepared by a skilled architect for modernizing the appear-

ance of all public space. It is often surprising to see how much can be done with old lobbies, lounges, writing rooms and dining space to give them new individuality and charm through relatively slight changes by the use of new decorative motifs.

Similar attention should be given to the condition of the woodwork, doors, windows and trim throughout the building. Possibly some of these items will have to be replaced. More often repainting will provide a satisfactory appearance. In the guest rooms, new floor coverings, the introduction of simple attractive lighting fixtures and the use of proper wall finishes will convert an old fashioned room to modern appearance at very low cost.

Refurnishing and Redecorating

The examination of the building should then proceed to determining what is needed in the way of new furniture, hangings, decorations and the like in public space and guest rooms. The estimate should consider the desirability of refinishing and re-upholstering such furniture as may be retained because of its satisfactory design and condition.

The result of this careful analysis will indicate the approximate investment which must be made to modernize the hotel. It is not generally sufficient to use casual figures in this work; it is far more desirable to have the necessary plans drawn, schedules of new furnishings and actual estimates obtained covering every item of expense which can be foreseen as a part of the remodeling and refinishing cost. Accuracy in this respect will eliminate much difficulty later on when the project is actually undertaken.

Returning again to the preliminary survey first referred to, we now have two complete sets of facts which must be brought together in the form of a new financial statement of the profits to be anticipated as the result of the proposed remodeling operation. It is highly important to analyze the business aspects of the budget before commitments are made. A financial statement covering the following items should be prepared:

On one side of the balance sheet should be shown the total investment involved in the completed remodeled building including a sound value for the



Banquet Room in the Hotel Lincoln before (left) and after Remodeling

present land and building. The actual cost of remodeling and redecorating and the cost of all incidental expenses pertinent thereto such as the cost of the survey, architect's fees, lost interest during construction, loss of revenue during the remodeling operation and the cost of any new financing. The next item should be a conservative and carefully checked system of the probable revenue to be derived from the building after the completion of all improvements. This should reflect the new room rates, the income from sub-rentals and concessions and the increased use of improved food service facilities or entertainment space.

Income and Cost Comparisons

The other side of the balance sheet should include all items of expense grouped under several headings: first, give the affixed charges including interest and amortization of mortgages and loans, taxes and insurance. A second item is generally an allowance for vacancies, unless this has been taken care of in the estimate of revenue. Third item covers all operating expenses including heat, light and power, labor, supplies, advertising expense, allowance for maintenance and other incidentals.

Side by side with this new financial statement should be a balance sheet for the past year or for previous years taken as an average to show clearly the financial result of the proposed changes as compared with the income derived under present conditions.

Armed with these facts, the hotel owner is prepared to undertake the necessary financing which will make his remodeling project possible. He will know definitely how great an investment will be required and how much he will have to borrow in addition to the funds which he can invest in the enterprise. He will have a conservative statement to show his bankers as to the increased income resulting from the changes. He can now actively proceed toward the culmination of his contemplated improvements.

The Danger of Procrastination

Probably the greatest bar to these profitable remodeling operations lies in the fact that all too frequently they have been deferred until the hotel is in a weak financial condition. It is very likely that the property has been mortgaged to the maximum and indeed it very frequently appears that banks



Lobby of the Hotel Lorraine, Chicago, after Remodeling

The Hotel Lorraine is a very good example of an old hotel which has been completely remodeled and refurnished with the result that it is now a modern and up-to-date hotel. The complete contract for furnishings and equipment was handled by the PICK-BARTH Companies.

Check List for Hotel Remodeling Projects

I. PRELIMINARY SURVEY

An impartial preliminary survey should be made preferably by a hotel expert, collecting data on the following major points:

1. Competition—existing accommodations in community.
2. Potential business—increase in population; manufacturing and growth of commercial life; transportation changes; automobile traffic; tourist and resort trade; increased demand for dining facilities.
3. Type of patronage—changing character; commercial, residential, tourist, etc.
4. Rates—conservative rate scale based on proposed accommodations.
5. Value of location for sub-rentals, including stores, concessions, and the probable rental derived therefrom.
6. Present status—volume of business, rates, profit or loss; factors which have influenced decline in profits.
7. Desirable facilities needed to command new patronage and increase revenue.
8. Is the present location still suitable for hotel purposes?

II. PLAN CHANGES

1. Present non-income producing space—lobbies, lounges, ballrooms, sample rooms, private or unused public dining rooms; guest rooms not in demand for lack of baths, etc.
2. Opportunities for converting unused or surplus space into revenue producing space, introducing stores and sub-rentals in parts of lobbies or dining rooms. Converting ballrooms and other semi-public rooms to guest rooms. Adding baths and toilets to unused or low rate guest rooms.
3. Improving service facilities—food service areas modernized, introducing cafeterias or coffee shops and eliminating waste space.
4. Modernizing mechanical equipment—new elevators, plumbing and heating lines, etc., as they affect the plan.

III. PHYSICAL CONDITION OF BUILDING

1. Complete measured drawings and structural drawings of existing building.
2. Inspection of footings, walls, floors, columns with respect to condition and feasibility of remodeling work.
3. Present condition of mechanical equipment, and changes necessary.
4. Present capacity of utilities—water supply, sewer connections, heat, light and power.
5. Present condition of exterior, including roof, fire-escapes, windows, etc.
6. Is building sufficiently sound to warrant remodeling?

IV. ARCHITECTURAL CHANGES

1. Exterior appearance changes desirable to command attention. Cleaning old walls, replacing cornices and ironwork, redesigning entrances, store fronts, etc.
2. Feasibility of modernizing public space—redesigning lobby, restaurant and lounge for attractive effect at moderate cost.
3. Present condition of woodwork, doors and windows throughout the building. Will replacement or only repainting be required?
4. Guest rooms—changes necessary to provide attractive appearance and comfort. Redecorating, new lighting fixtures, new floor coverings.
5. Design of new sub-rental space. Stores, concessions, etc.

V. FURNITURE AND DECORATION

1. Public rooms—requirements for furniture, hangings, floor coverings.
2. Restaurant—new furnishings and decorations, including modern silver, linen, glassware, dishes.
3. Guest rooms—refinishing present furniture where feasible; new furniture and accessories required.

VI. FINANCING

1. Complete and conservative cost estimates for changes contemplated above.
2. New balance sheet.
- (a) Investment—land, buildings, alterations, furnishings, fees, lost interest, loss of income during remodeling.
- (b) Revenue—room rates, occupancy, sub-rentals; deduct vacancies.
- (c) Fixed charges—interest and amortization, taxes, insurance.
- (d) Operating expense—heat, light, power, supplies, labor, maintenance.
- (e) Estimated profit—net revenue less fixed charges, operating expense and preferred stock commitments.
3. Comparative balance sheet—present business situation compared with estimated condition after alterations.
4. Complete sketch plans showing all changes with outline specifications.
5. Other supporting evidence—accountant's, architect's, builder's, and hotel consultant's appraisals and reports.
6. Statement of new financing required, supported by above data for presentation to bankers, mortgagors and stock-holders.

are carrying the building at a loss simply because they have found no method of foreclosing on a basis which will permit them to release a substantial part of their investment. Often, under these distressing conditions, a well-planned remodeling operation can be successfully carried out because it will probably represent a life-saver to those whose funds are already hopelessly tied up. In any case, it is logical to seek the new funds necessary to carry out a modernizing proposition through those who already hold mortgages or a stock interest in the present hotel. A number of cases have been reported where all of the funds needed have been procured through the bank or mortgagor holding the senior securities because the new balance sheet has indicated a hopeful chance of recovering their investment to better advantage in a more logical way than is offered through any other recourse. Subsequently with the hotel re-established as a paying enterprise, the banks have been able to dispose of their mortgage profitably or the hotel owner has been able to pay such satisfactory dividends that the issues acquired new value and are gladly retained by their holders.

In addition to this factor, there is a definite community profit in having improved hotel facilities

which may lead to popular support providing the hotel manager or owner has convincingly presented his facts not only through the medium of his financial statement, but also through attractive sketches showing how the improvements are to be carried out and the resulting appearance of the new building.

It should be remembered that in order to make a remodeling project logical, it should show a return of from 20 per cent upwards on the new investment required. This margin is sufficient to interest bankers even when the existing hotel has been a losing venture for it at least assures them of a normal interest on their present investment. It should also be remembered that the actual cost of a remodeling project is only a part of the increased value which accrues to the property when the work is completed. Present real estate values are enhanced; the structure acquires a real market value; and generally the entire neighborhood is improved.

It is important, during the process of obtaining new financing, to have all details so carefully worked out that the estimates can not be attacked as being unsound in any respect, presuming the estimates have been obtained from reputable sources but the promoter should be very cautious to indicate that



The fine old Hotel Pfister, Milwaukee, was recently rejuvenated by Remodeling

A fine new Coffee Shop and kitchen, as well as the majority of the furnishings for the Hotel Pfister, were supplied by the PICK-BARTH Companies.

Guest Rooms in the Remodeled Hotel Pfister, Milwaukee, Wis.



Just how a hotel built a quarter of a century ago, has been completely remodeled and refurnished into one of the most modern and beautifully furnished hotels in the middle west, is shown by the illustrations above of some of the large homelike guests rooms of the remodeled Hotel Pfister. The PICK-BARTH Companies supplied a large part of the furnishings and equipment.

the estimates are tentative and that before any actual commitment becomes necessary, the complete working drawing and specifications will be worked out and definite contract figures obtained covering all of the structural changes and all refurnishing and redecorating involved. Stockholders and bankers may refuse to enter into a refinancing plan because the project is not carefully enough developed to prove its soundness. There is frequently strong opposition to be overcome. There is a sense of failure to be eliminated and changed into an optimistic consideration of the possibilities of success. This cannot be done without an adequate schedule of the proposed operation developed in such detail as to be readily understood and backed by opinions which carry weight.

Because of this situation, it is desirable to employ only the best counsel on all phases of such an improvement program. It would be well to employ a recognized hotel consultant for the preliminary surveys; to have the financial statements substantiated by the opinions of expert accountants thoroughly acquainted with hotel operations. It is equally advantageous to employ an architect of good standing and finally to entrust the actual remodeling work and the redecorating and furnishing only to firms of the highest calibre. To deviate from such a policy is to endanger success for the very situation which brings about the necessity for remodeling and modernizing tends to undermine the confidence. This must be counteracted by the employment of organizations of recognized ability and integrity.

In the preceding outline, the principal points which might occur on an extensive remodeling pro-

ject have been touched upon. This does not mean that all remodeling operations necessarily are complex or that they involve fundamental changes in its structure or its equipment. It is quite possible to do a great deal towards bringing a hotel up to date in its appearance and facilities by simply redecorating and refurnishing the interior and by installing modern service equipment. Other successful remodeling operations require only the elimination of non-income producing space by the introduction of stores or by the conversion of unused ballrooms, private dining rooms and other semi-public areas for new guest rooms. In fact, the extent of a remodeling operation varies with every building. To do more remodeling than is really needed tends to cut down the ultimate profits just as much as to do too little. This matter is generally guided by the careful surveys described at the beginning of this chapter which, if properly handled, will show the work to be done which will result in the greatest net profit.

It is just as essential in the remodeling and refurnishing of a hotel as with a new hotel to have the whole thing handled by one organization of hotel furnishing and equipment experts such as the PICK-BARTH Companies. The large number of fine hotels that we have completely remodeled and refurnished throughout the country is ample evidence of our experience and ability in this highly specialized type of work. Our men are at the service of hotel men and their architects in making the preliminary survey to see just what is necessary to make the hotel modern and first class in every respect.



Bedroom of the Elms Hotel, Excelsior Springs, Mo., after Remodeling

The Hotel Elms is another hotel which has been completely remodeled, refurnished and equipped into one of the finest and most modern resort hotels in the country. The complete refurnishing contract was handled by the PICK-BARTH Companies.



The Park Central. New York

THE FOLLOWING PAGES PRESENT
A GROUP OF THIRTY-ONE OUTSTAND-
ING HOTELS OF VARIOUS TYPES,
RANGING IN SIZE FROM
ONE HUNDRED FIFTY TO
THREE THOUSAND ROOMS



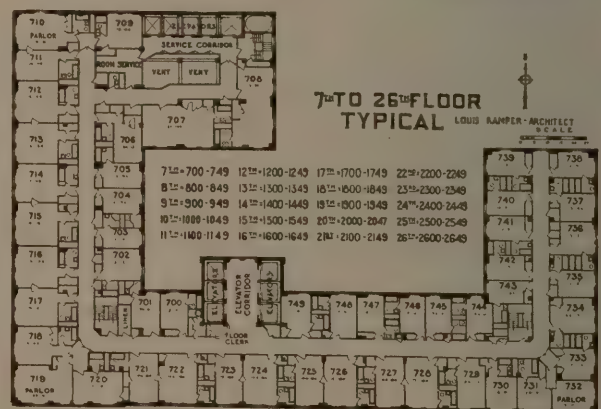
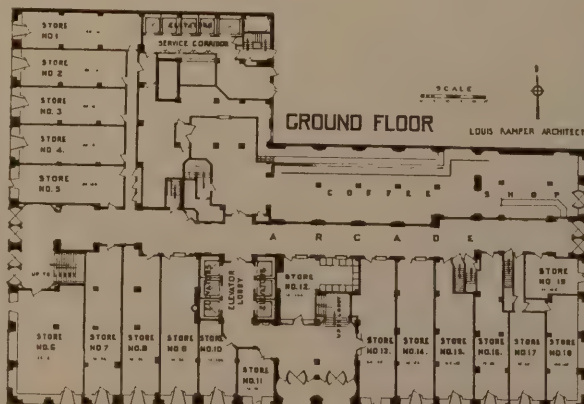
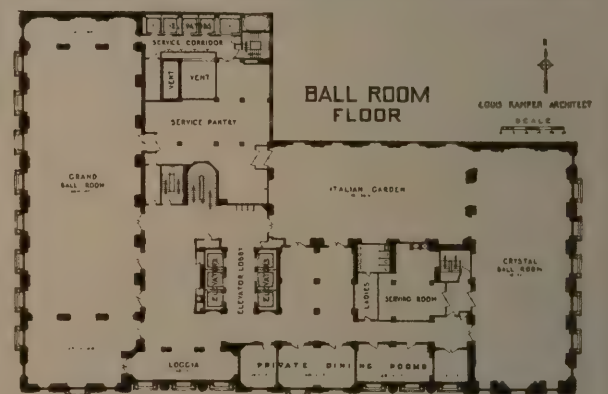
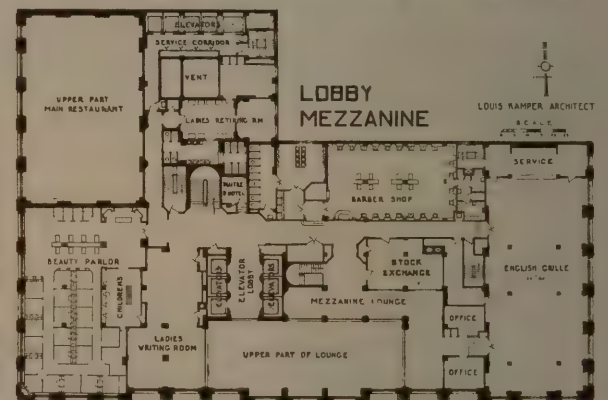
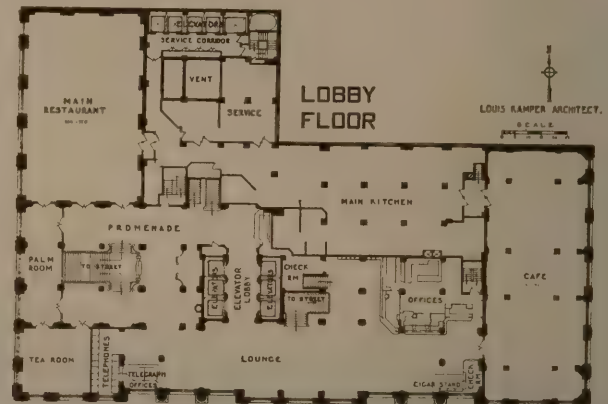
The Hotel Book-Cadillac, Detroit, Mich.

Louis Kamper, Architect



THIS building is of steel skeleton type with floors of reinforced concrete. The exterior is of face brick trimmed with Indiana limestone and architectural terra cotta. The building contains nineteen stores and shops with exterior and interior arcade entrances.

The complete Furnishings, Interior Decoration and Equipment for the Hotel Book-Cadillac were executed by the PICK-BARTH Companies, comprising one of the largest hotel equipment contracts ever placed.



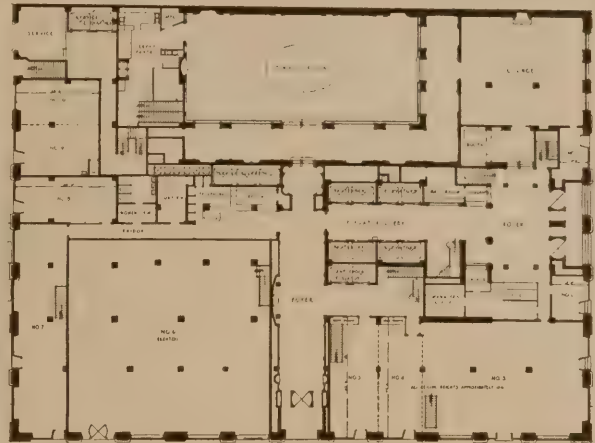


The Savoy-Plaza, New York

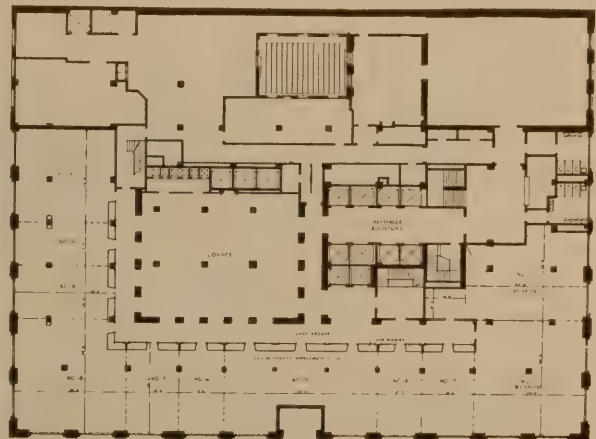
McKim, Mead & White, Architects

THIS is one of the newest of New York's fine apartment hotels. It is designed for complete hotel service of the most modern and luxurious type. A number of attractive stores have been incorporated in the first and second floor plans, including large restaurants which will cater to the public as well as to guests. The typical floor plan shows a subdivision into apartments of one to three rooms, each bedroom having a bath. Kitchens are not provided, but some apartments have serving pantries and a large main serving pantry is provided on each floor. The plan is flexible in arrangement, so apartments of various sizes can be arranged if required.

The Kitchens of the Savoy-Plaza were Planned and Equipped by PICK-BARTH Engineers.



First Floor Plan



Second Floor Plan



The Stevens

Chicago, Ill.

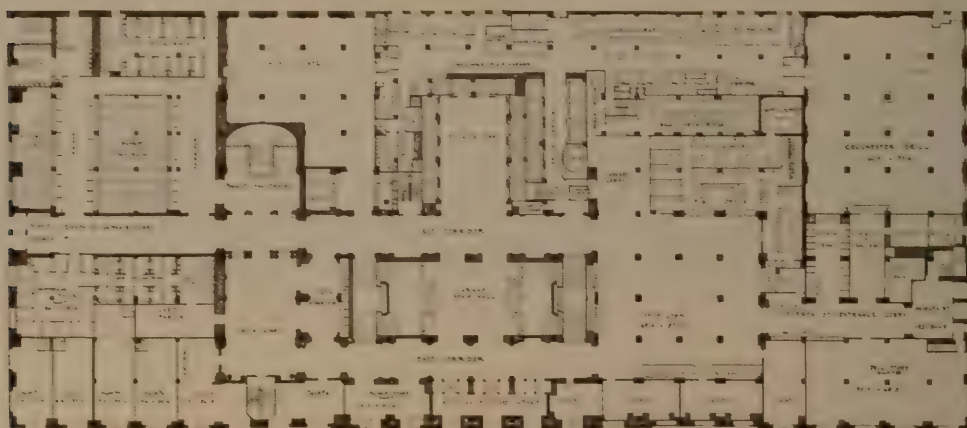
Holabird & Roche, Architects

THE Stevens Hotel, which is the largest hotel in the world, contains approximately 3,000 rooms. The construction is of steel with exterior of red brick trimmed with Indiana limestone. This hotel fronts 402 feet on Michigan Avenue and 174 feet on Seventh and Eighth Streets. An additional wing, 52x174 feet, is called the Service Building and used for that purpose. The structure is 23 stories high and the typical floor plan is approximately 70,000 square feet in area.

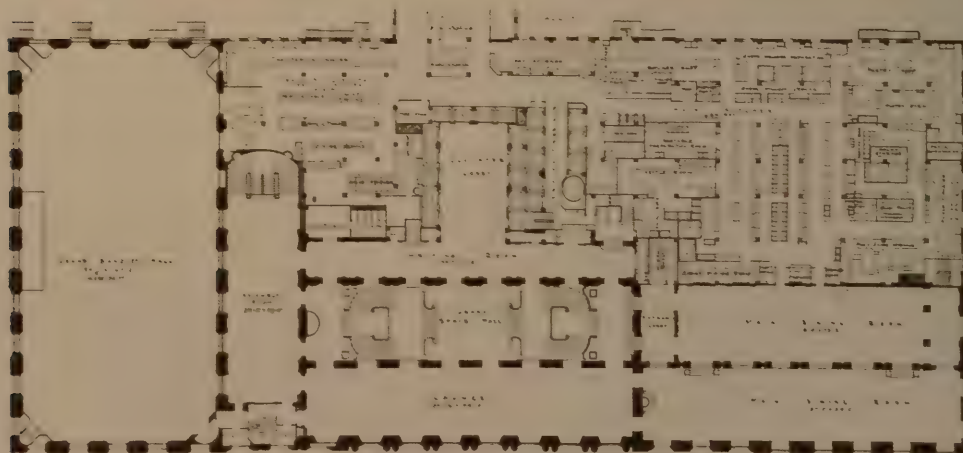
The kitchen of the Stevens Hotel was demolished during the fire in the hotel, and was reconstructed by the P. C. & R. Co. Corporation.



The Largest Hotel in the World



First Floor Plan

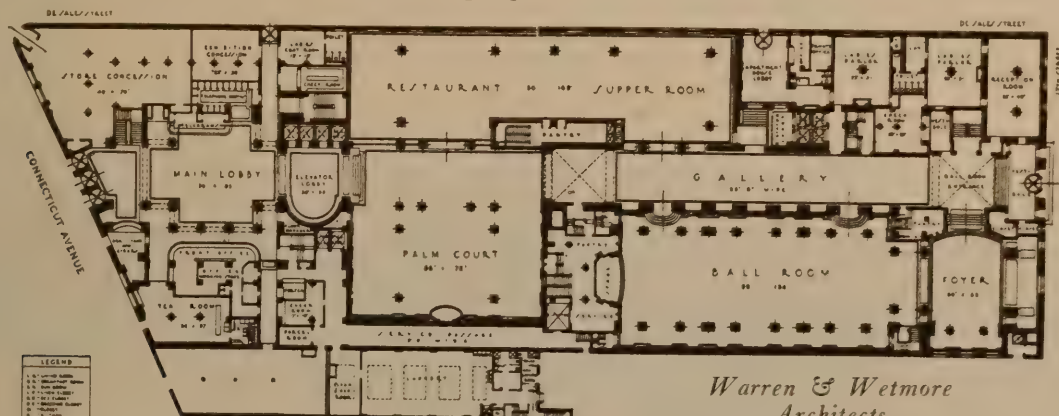


Second Floor Plan

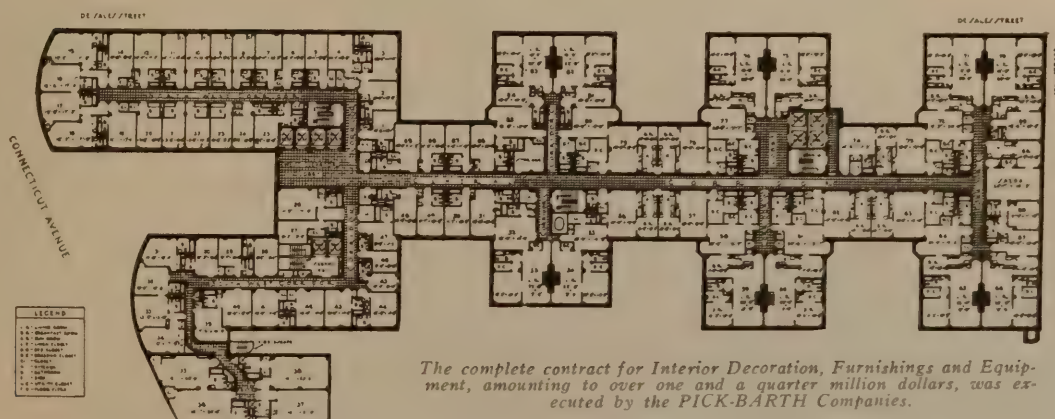


Mayflower Hotel, Washington, D. C.

THIS project, as shown by the plans, includes a large hotel and a three-section apartment hotel, having direct hotel service. The first plan shown below indicates the main floor of the hotel section. The second plan shows a typical floor of the entire group.



Warren & Wetmore
Architects
Robt. F. Beresford, Associate



The complete contract for Interior Decoration, Furnishings and Equipment, amounting to over one and a quarter million dollars, was executed by the PICK-BARTH Companies.

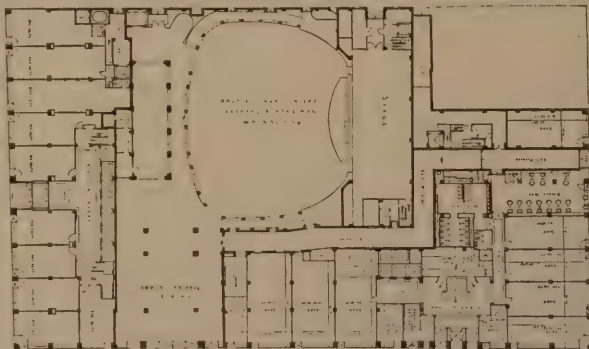


Hotel Bismarck, Chicago, Ill.

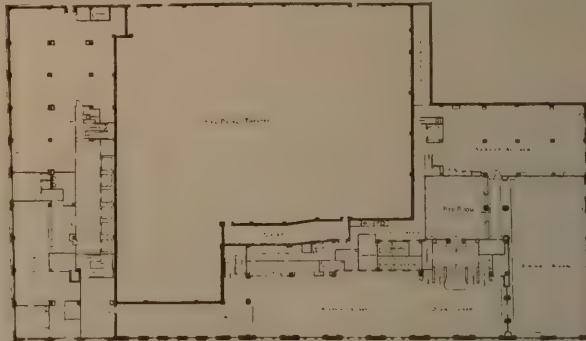
Rapp & Rapp, Architects

THIS is one of the most interesting of the new commercial hotels of Chicago. It includes within the structure a theater having a seating capacity of 1500 and there is a taller office building section adjoining the hotel and fronting on another street. Interior illustrations showing unusual decorative treatment of the public rooms will be found in the furnishing section of this book.

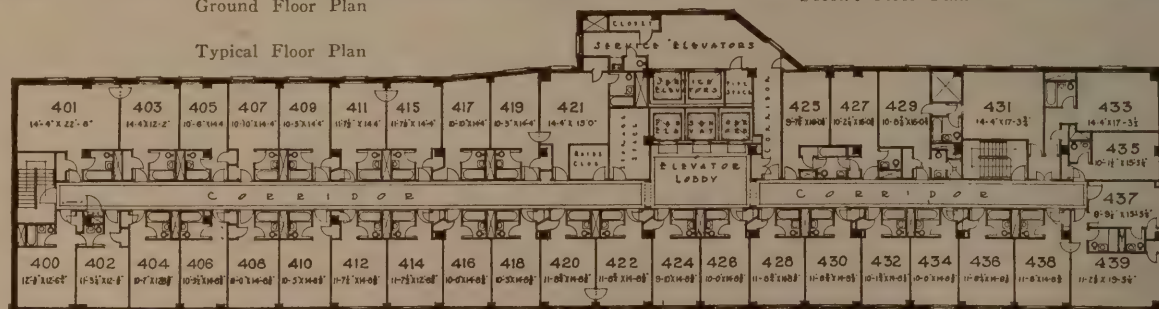
The Hotel Bismarck was Furnished and Equipped in its entirety by the PICK-BARTH Companies.

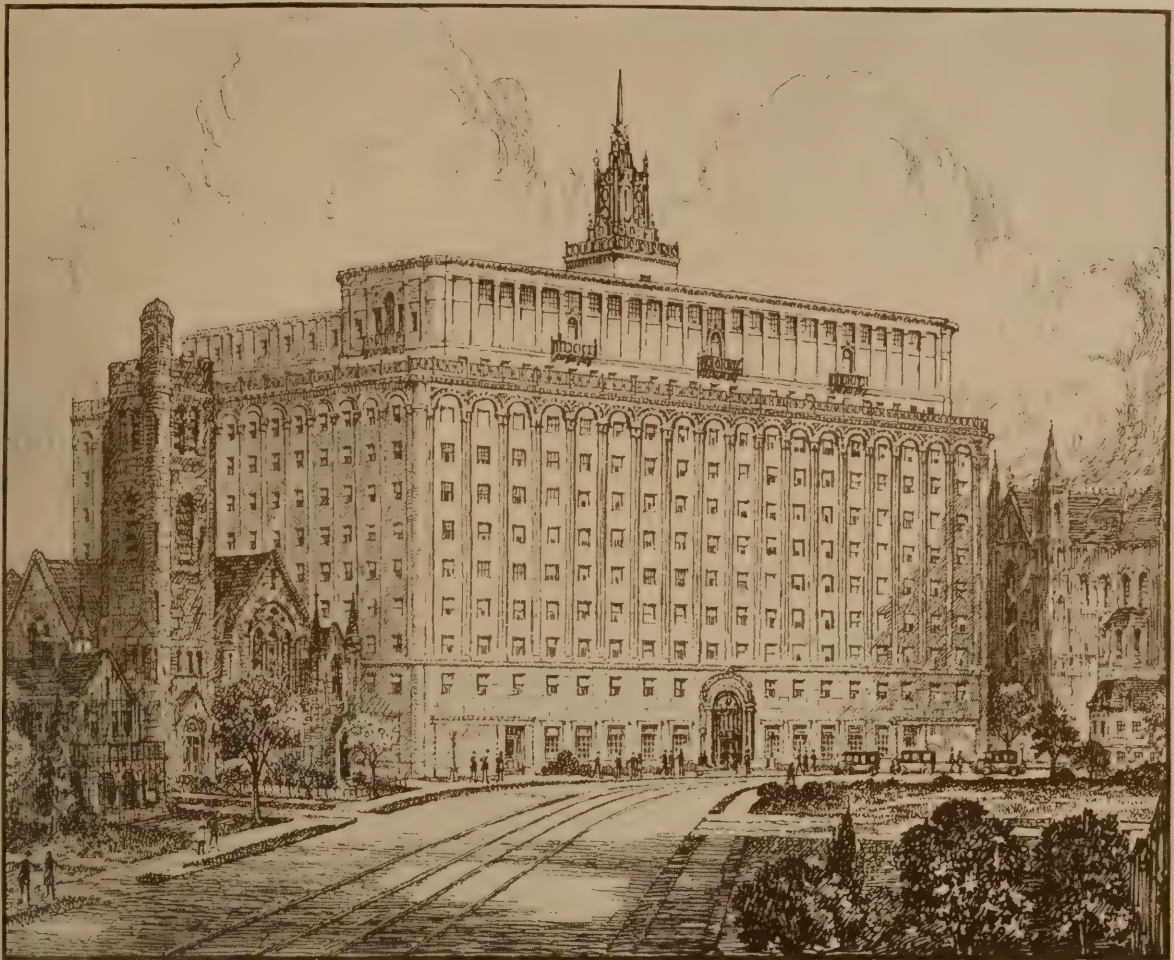


Ground Floor Plan



Second Floor Plan





Webster Hall

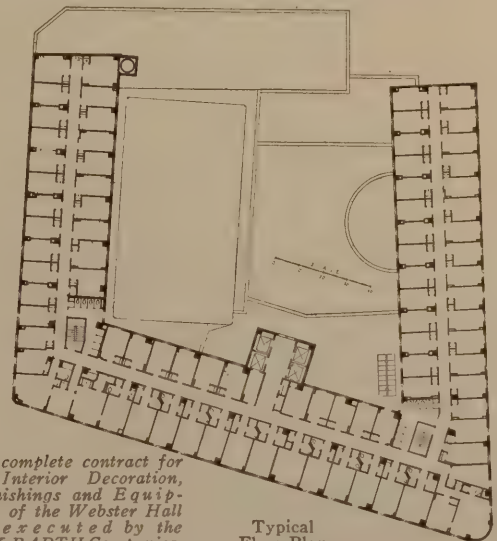
Pittsburgh, Pa.

THIS is one of the largest and most interesting of the bachelor hotels recently constructed in this country. The plans herewith show clearly the general layout of public and private rooms. The striking treatment of the public rooms, shown in colors on pages 233-236 are of particular interest.

Henry Hornbostel, Architect
Eric F. Wood & Co., Associate Architects



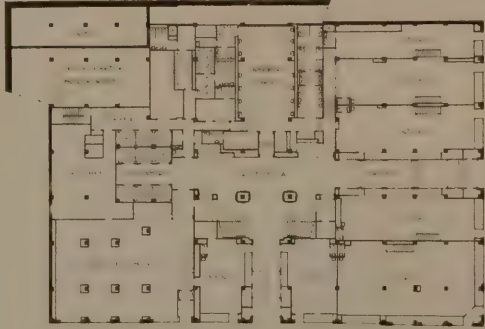
Main
Floor Plan



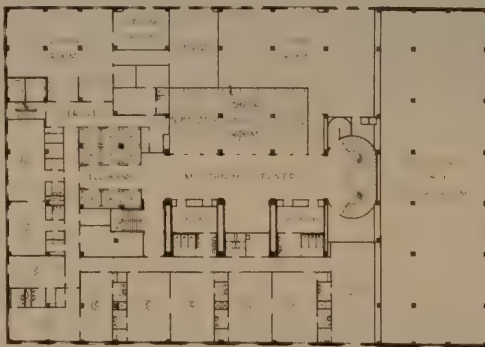
Typical
Floor Plan

The complete contract for the Interior Decoration, Furnishings and Equipment of the Webster Hall was executed by the PICK-BARTH Companies.

Hotel Schroeder, Milwaukee, Wis.



First Floor Plan



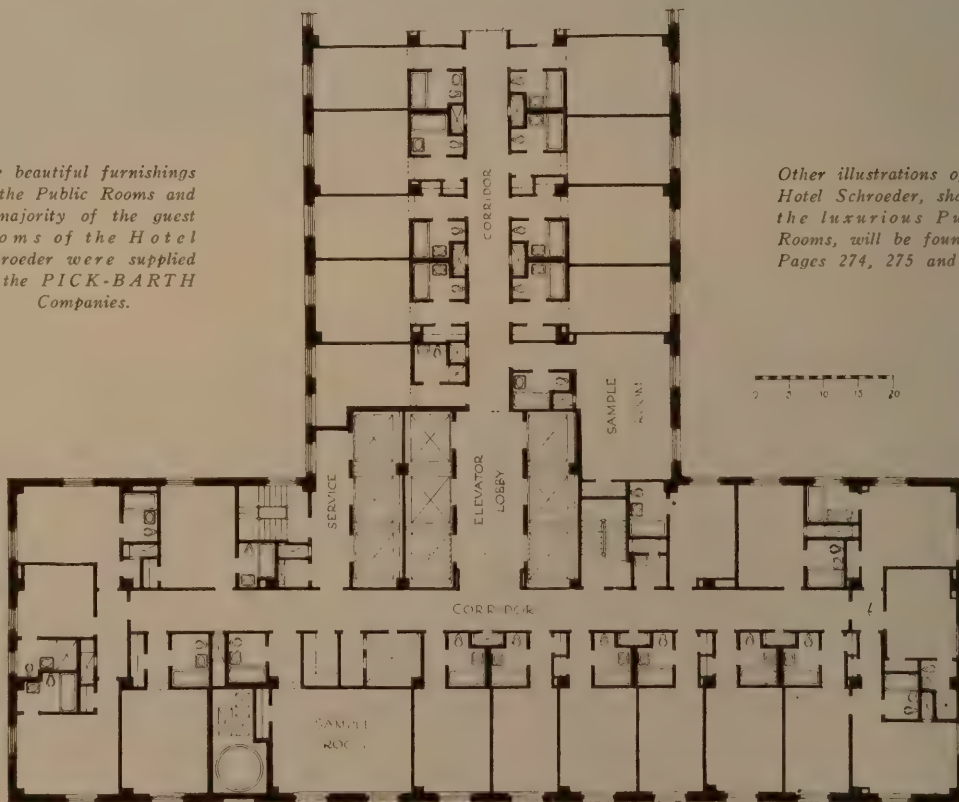
Fourth Floor Plan



*Holabird & Roche
Architects*

The beautiful furnishings of the Public Rooms and a majority of the guest rooms of the Hotel Schroeder were supplied by the PICK-BARTH Companies.

Other illustrations of the Hotel Schroeder, showing the luxurious Public Rooms, will be found on Pages 274, 275 and 276.



One Half of Typical Floor Plan

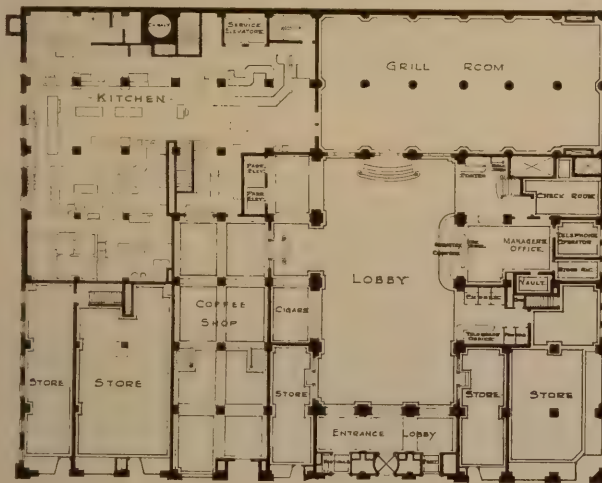
Hotel Duluth

Duluth, Minn.

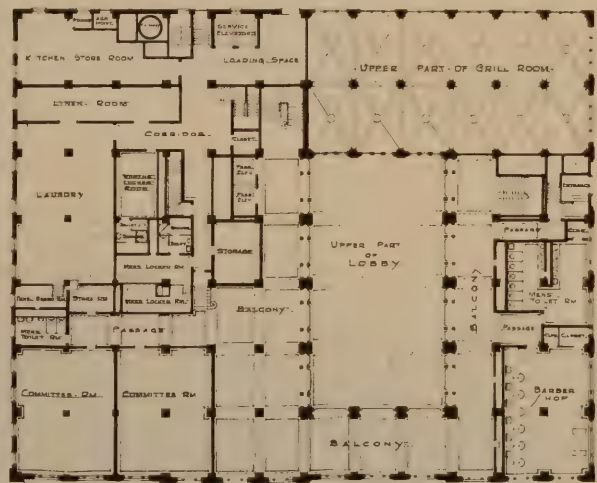
Martin Tullgren & Sons, Architects

A THOROUGHLY modern structure containing 450 guest rooms, situated with a beautiful outlook over Lake Superior. Even with part of the main floor given over to four stores, there is room for a most impressive lobby, a large main dining room and a coffee shop, together with a kitchen of generous size and capacity. The hotel was designed to occupy an important place in the social life of the city, and on the third floor there is a big banquet hall as well as six smaller dining rooms for smaller parties.

The majority of the Furnishings and all of the Food Service Equipment were supplied by the PICK-BARTH Companies.



First Floor



Second Floor



Third Floor



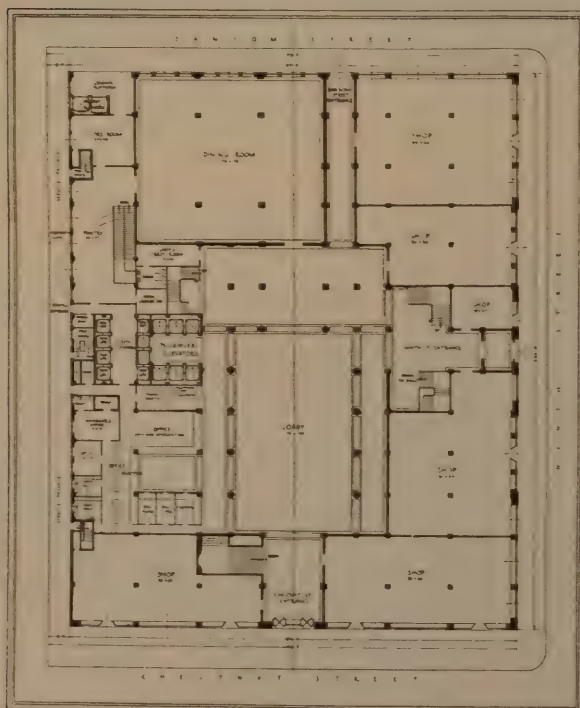
Typical Floor



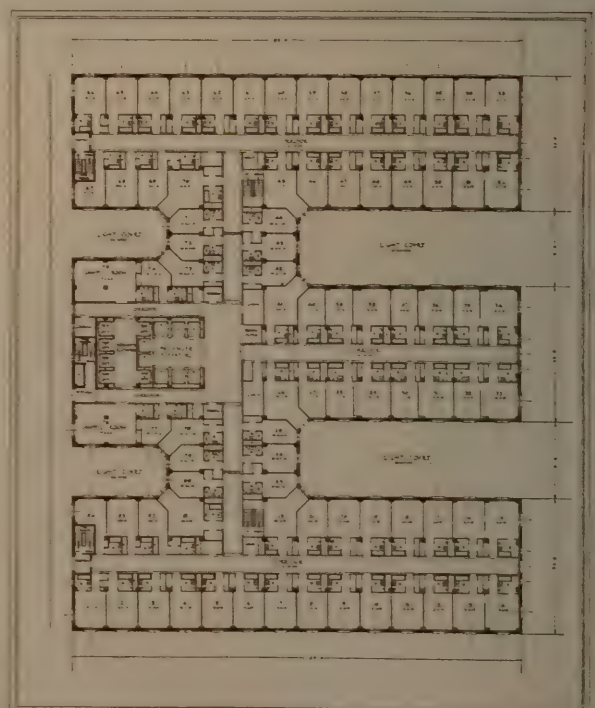
Hotel Benjamin Franklin, Philadelphia, Pa.

Horace Trumbauer, Architect

The Kitchens and Coffee Shop of this large commercial hotel were Planned and Equipped by PICK-BARTH Engineers.



Ground Floor Plan



Typical Floor Plan



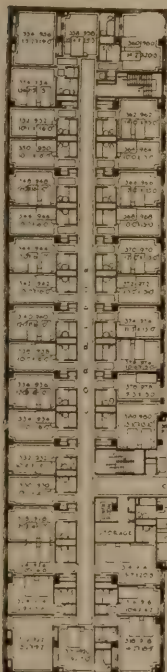
Hotel Olympic

Seattle, Washington

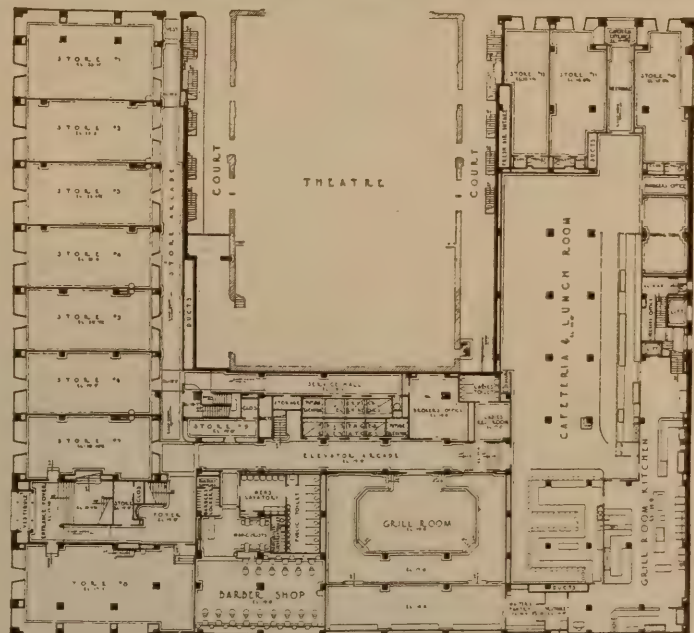
Geo. B. Post & Sons, Architects

THIS hotel was opened in December, 1924 and is owned by a local community group of approximately 3,500 investors. The total cost was \$5,374,000, of which \$800,000 is represented in the furnishings.

The building is 14 stories high, contains 617 rooms and the plans allow for an addition to contain 300 more rooms. The exterior is of face brick with granite, Belgian marble, and terra cotta trim.



Typical Floor Plan



Plan of the First Floor

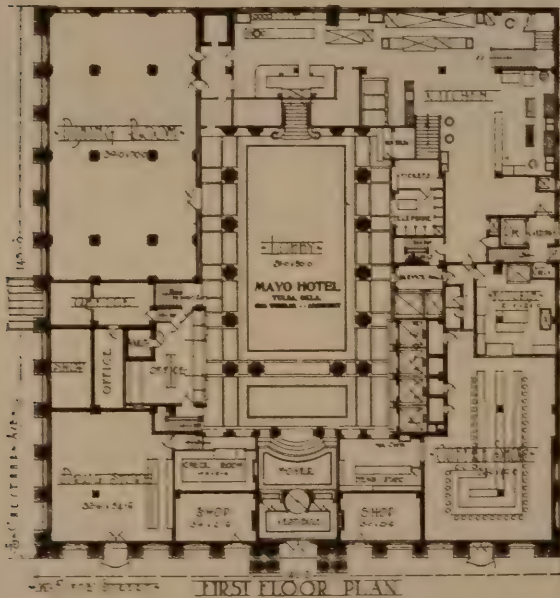
Furnishings, Chinaware, Glassware, Silverware and Linens were supplied by the PICKBARTH Companies.

Mayo Hotel, Tulsa, Oklahoma

George Winkler, Architect



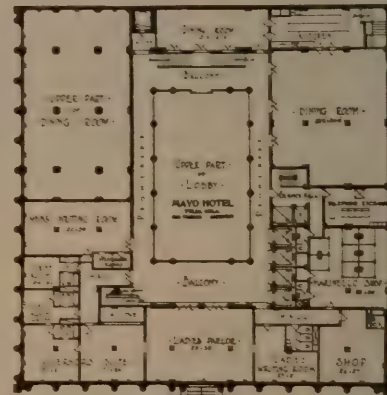
TYPICAL FLOOR PLAN



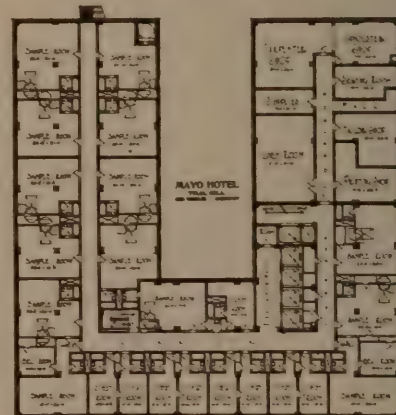
FIRST FLOOR PLAN

THE Mayo Hotel, completed in 1925, is 20 stories high and has approximately 600 guest rooms. The building is of fireproofed steel construction with metal doors and trim throughout. Floors are of concrete, and exterior of face brick with limestone and granite trim.

The Kitchen and Coffee Shop of the Hotel Mayo were Planned and Equipped by PICK-BARTH Engineers.



MEZZANINE FLOOR PLAN



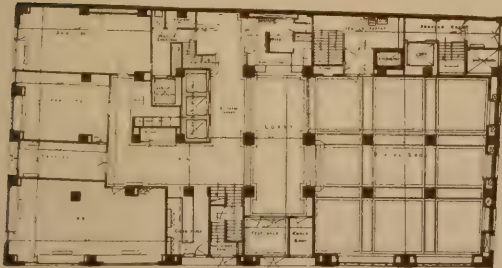
THIRD FLOOR PLAN

Hotel Mayfair

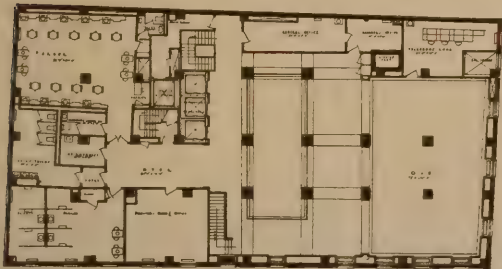
St. Louis, Mo.

THIS is an 18-story commercial hotel containing 400 rooms all with tub bath or shower. The total investment is approximately \$2,250,000. The exterior is of face brick with terra cotta trim.

The Kitchen and Coffee Shop of the Hotel Mayfair were Planned and Equipped by PICK-BARTH Engineers.



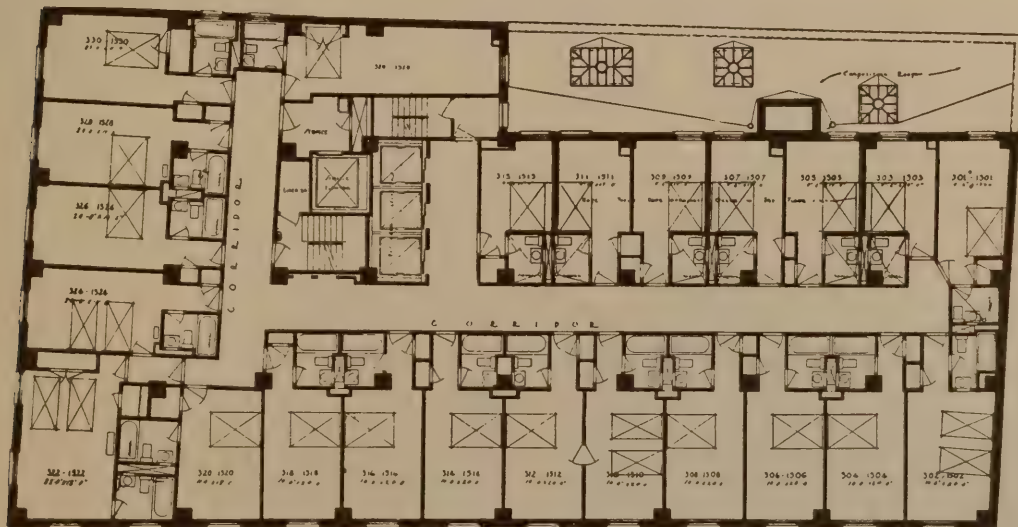
First Floor



Mezzanine Floor



Preston J. Bradshaw, Architect



Typical Floor Plan



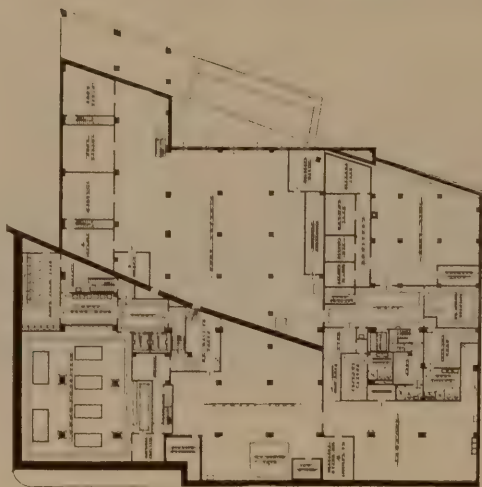
Hotel Rowe

Grand Rapids, Mich.

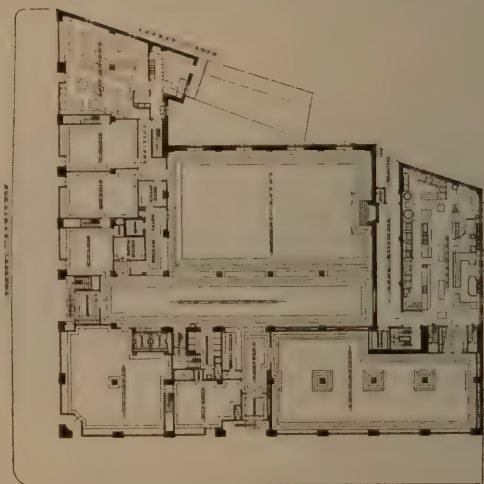
B. K. Gibson & Co., Architects

THIS eight story commercial hotel was completed in 1923 and contains 350 guest rooms. An interesting innovation is the use of the mezzanine floor for pipe loft and mechanical equipment space. In addition to the restaurant and coffee shop, five stores were included on the main floor which help materially in carrying the overhead cost.

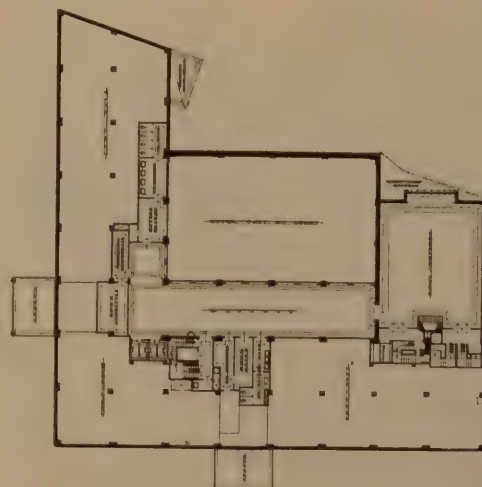
The Kitchen and Coffee Shop were Planned and Equipped by PICK-BARTH Engineers.



Basement Plan



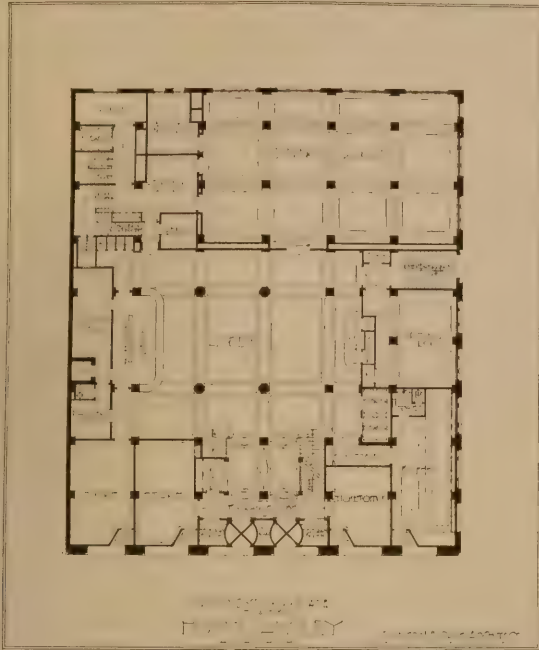
First Floor



Mezzanine Floor



Typical Floor

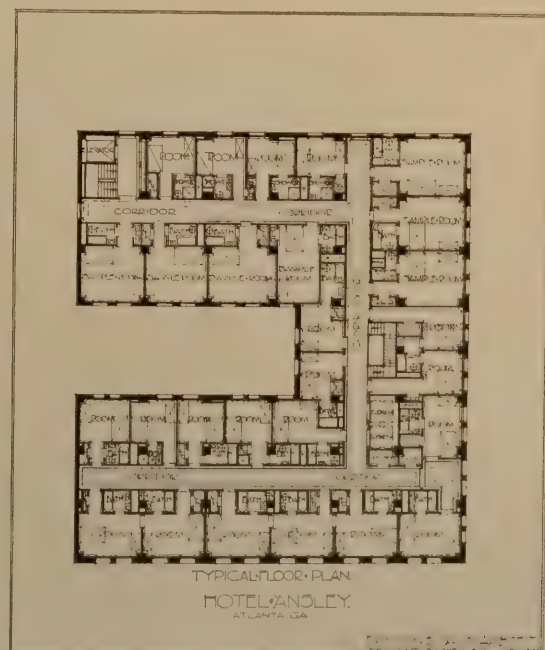
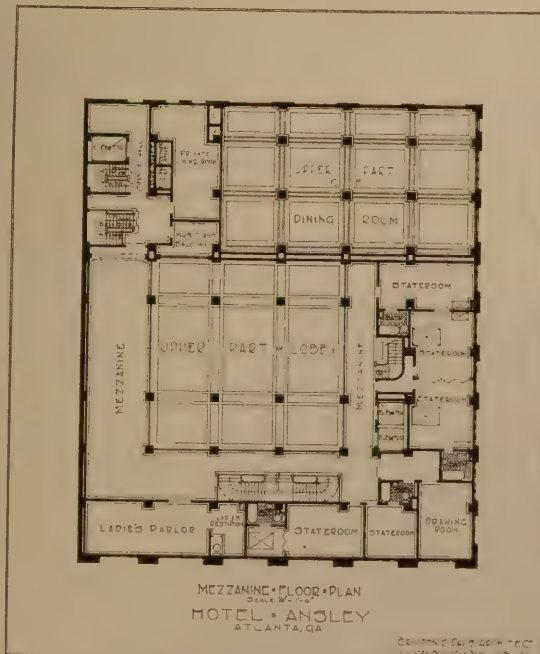


Hotel Ansley, Atlanta, Ga.

Brinton B. Davis, Architect

THIS commercial hotel contains 250 rooms with bath, 21 sample rooms, and 20 two-room suites. It was completed in May, 1913, and built of reinforced concrete with exterior walls of face brick and terra cotta. A rear wing was added six years ago.

A large share of the Furnishings were by PICK-BARTH.

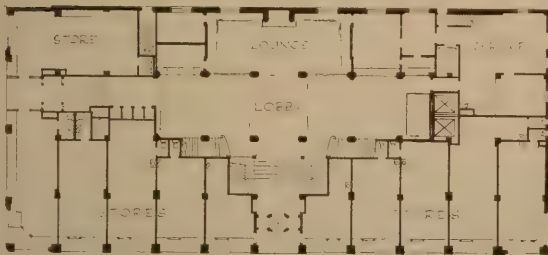


Hotel Louis Joliet

Joliet, Ill.

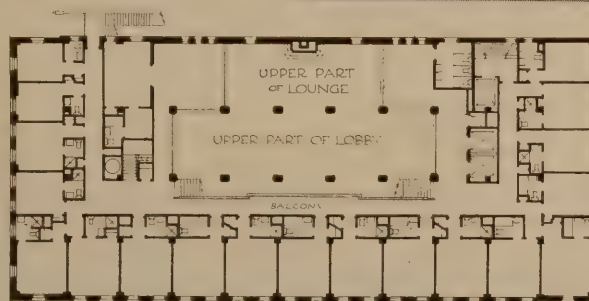
Zimmerman, Saxe & Zimmerman, Architects

THE first floor of this commercial hotel is largely given over to stores. The public space has been minimized in order to establish an income basis for a very large percentage of the entire building. Thus, the income bearing space bears an unusually high ratio to the floor space. For this reason, the general plan is well worth careful study.

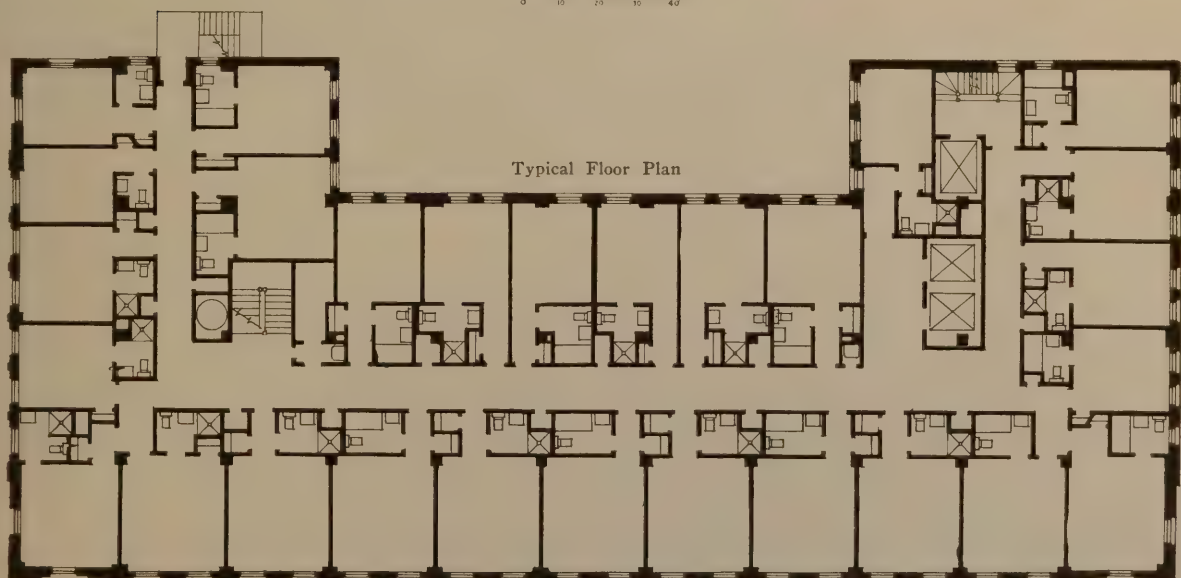


Above
Main Floor Plan

The complete contract for the Interior Decoration, Furnishings and Equipment of the Hotel Louis Joliet was executed by the PICK-BARTH Companies.



Left
Mezzanine Floor Plan



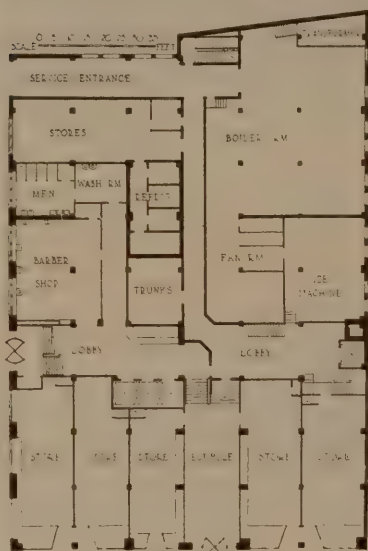
Typical Floor Plan

SCALE
0 10' 20' 30' 40'

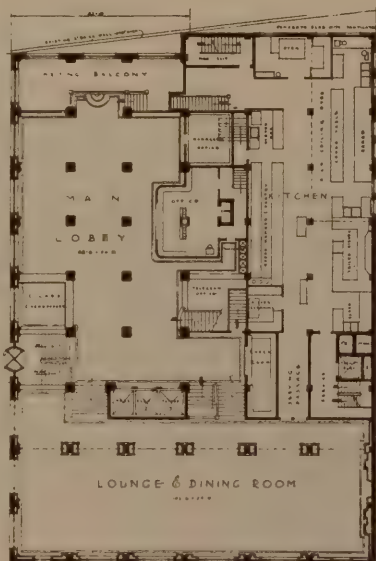
Hotel Francis Marion Charleston, S. C.

Wm. L. Stoddart, Architect

THIS is a 300-room commercial hotel, 12 stories in height and cost approximately \$1,250,000 to build and \$300,000 to furnish. Of the 292 bedrooms, 272 have private baths, and 18 have lavatories and toilets. Five stores have been introduced on the main front of the ground floor to provide sub-rentals, which will help to offset the carrying cost. The accompanying plans indicate clearly the arrangement of public space and of the typical bedroom floors. The ballroom with its reception hall and serving pantry are efficiently planned on the second floor.



Ground Floor



First Floor



Second Floor



Typical Floor



The contract for the Furnishings and Equipment of the Hotel Francis Marion was executed by the PICK-BARTH Companies.

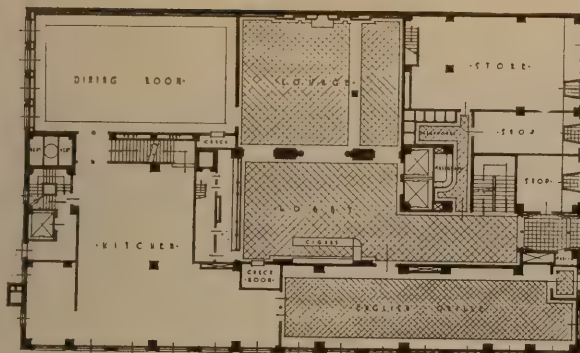
Hotel Fort Hayes

Columbus, Ohio

*Edwin Pruitt & Co. and
Herbert B. Beidler, Architects*

THIS commercial hotel, completed in November, 1924, is of reinforced concrete construction with metal pan floor system. The exterior is buff colored face brick with terra cotta trim. There are 280 guest rooms, each with bath or showers, and nine sample rooms as shown on the second floor.

*The complete contract for
Interior Decoration, Fur-
nishings and Equipment of
the Hotel Fort Hayes was
executed by the PICK-
BARTH Companies.*



First Floor



Mezzanine Floor



Second Floor



Typical Guest Room Floor



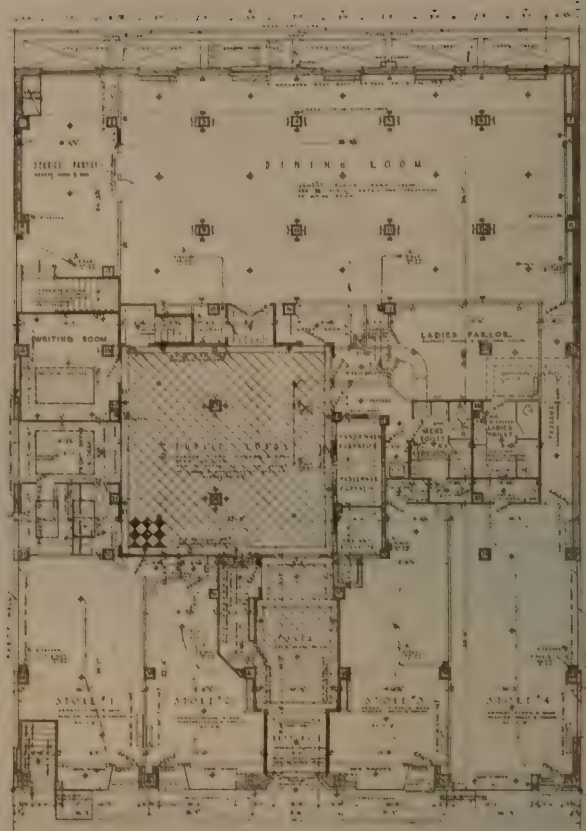
Forty-Fourth Street Hotel

New York City

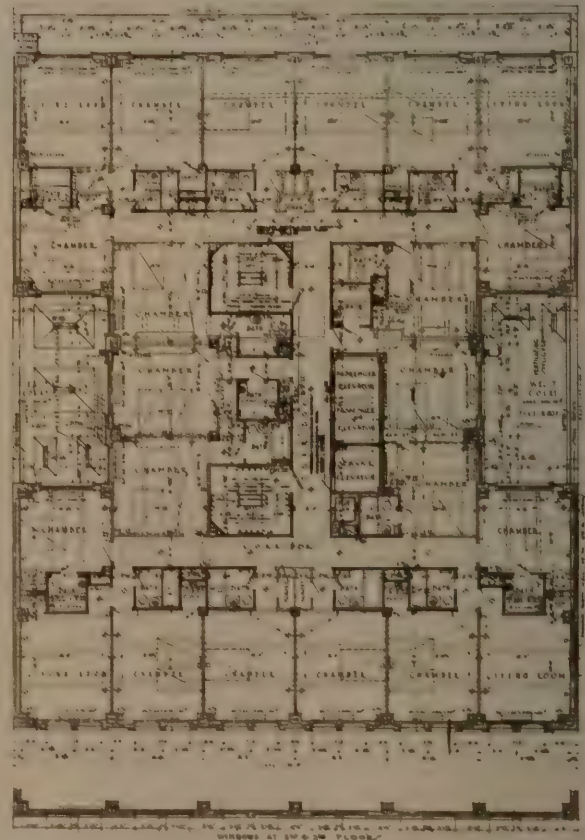
Rouse & Goldstone, Architects

THIS hotel recently constructed in New York is a combination transient and apartment hotel, primarily designed to serve those who wish to live in the immediate central business and theatrical districts of New York. Typical room layouts include one and two room suites with bath. Here no effort has been made to provide kitchenette or pantry service, the restaurant service being primarily confined to the main dining room. This is an example of a hotel which has been designed to meet definitely established conditions of demand in a congested district of a large city. Four stores have been introduced on the ground floor because of the high rental values established in this important street. Vestibule and foyer have been reduced to small size because of the value of the front space in a location of this type.

The Forty-Fourth Street Hotel was completely Furnished and Equipped by the PICK-BARTH Companies.

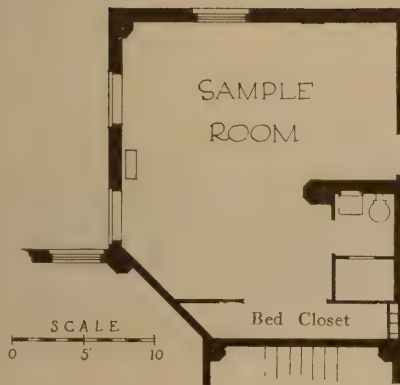


Main Floor



Typical Floor

The Furnishings and Equipment for the beautiful Hotel Bergonian were supplied by the PICK-BARTH Companies.



Typical Sample Room



Hotel Bergonian

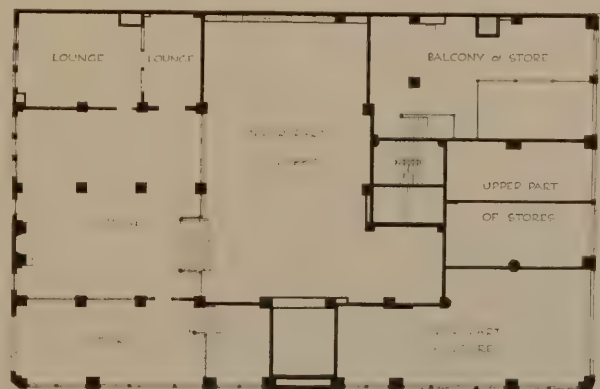
Seattle, Wash.

Stuart & Wheatley, Architects

THE HOTEL BERGONIAN opened in July, 1927, is a twelve story building of reinforced concrete and face brick containing 240 rooms all with bath. The main dining room is in the basement and seats 175. There is also a coffee shop seating 54 and a private dining room seating 50. There are seven shops, one of which has a second level, opening on the mezzanine which is made possible by the steep slope of the street level at the front of the hotel. There are several sample rooms which are equipped with disappearing beds.



Main Floor Plan



Mezzanine Floor Plan

Palmer House

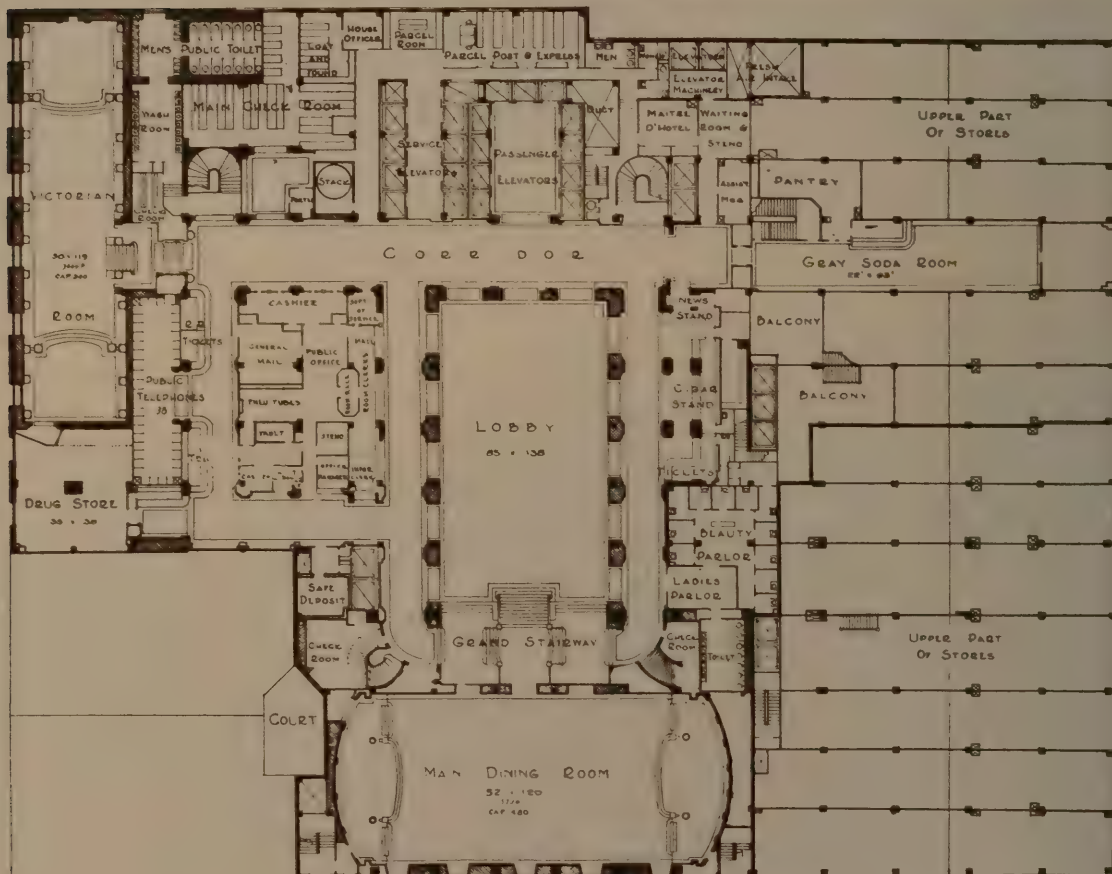
Chicago, Ill.

Holabird & Roche, Architects

THIS gigantic structure probably has no parallel in the country in one respect—that of the extent of the subrental space. The Palmer House is located on State Street in the very heart of one of the world's greatest shopping districts. Ground rentals here have enormous value, and the Palmer House has capitalized on this by devoting the entire ground floor of the building to an arcade and shops, and in addition contains five solid floors of shops in the State Street section of the building, all entirely separate from the hotel proper and served with their own elevator system. The hotel itself contains 2,268 guest rooms, thus being one of the largest in existence. It is especially notable for the size and completeness of its kitchens and food service departments, and for the exceptional quality of their equipment.



The Complete Equipment for the Palmer House Kitchens and Lunch Room was engineered and installed by the PICK-BARTH Companies.



Lobby Floor Plan—Note the Unusual Office and Lobby Arrangement

Hotel Roosevelt, New Orleans, La.

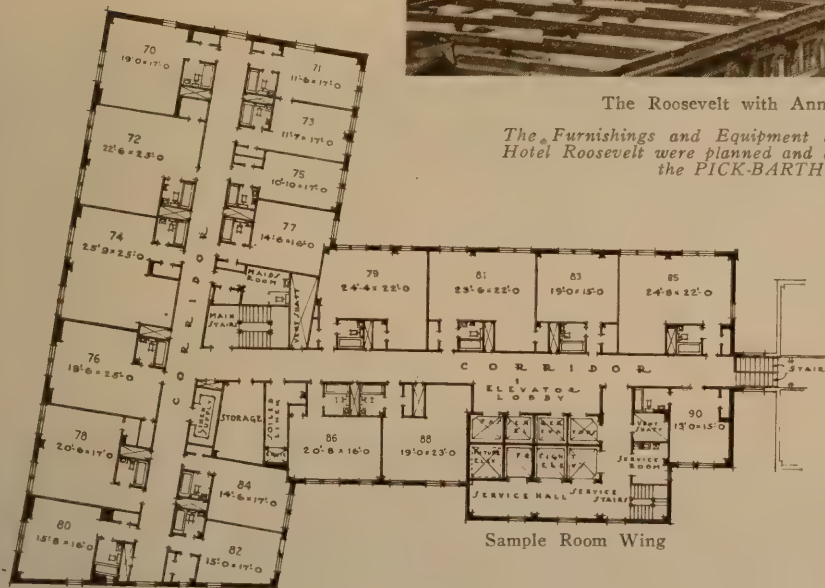
*Favrot & Livaudais, Ltd.,
Architects*

WITH the addition of a 353 room annex, which was completed in the fall of 1925, the Hotel Roosevelt became one of the largest commercial hotels in the South. The construction is steel frame with hollow tile exterior walls, finished with face brick and terra cotta. The typical floor plan is shown below, the new wing or annex being at the left.



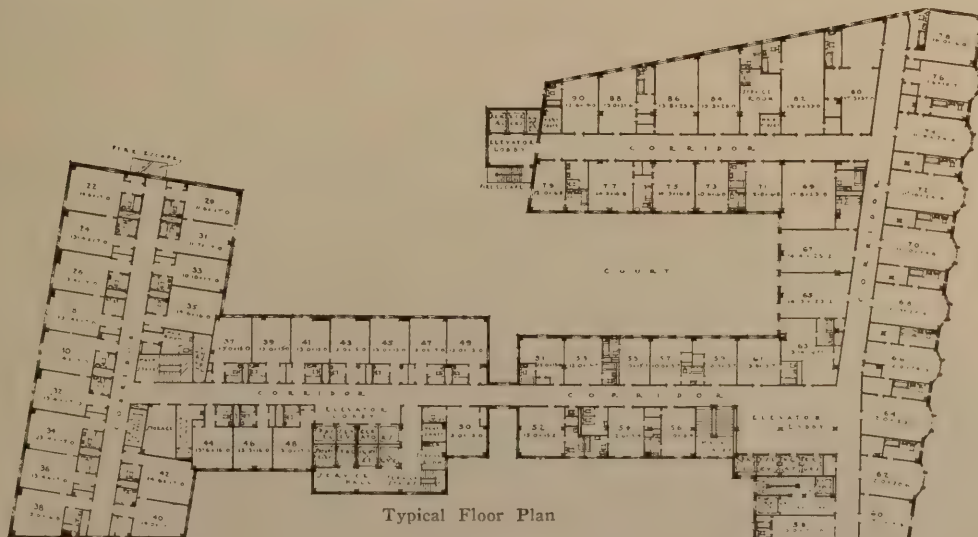
The Roosevelt with Annex Built in 1925

The Furnishings and Equipment of the new addition to the Hotel Roosevelt were planned and executed in their entirety by the PICK-BARTH Companies.



Sample Room Wing

AT the left is shown a typical layout of sample rooms. Each room has a bath and closet space. Note how various sized rooms have been provided to meet the needs of commercial travelers, some sample rooms being as large as 22 by 24 feet over-all.



Typical Floor Plan



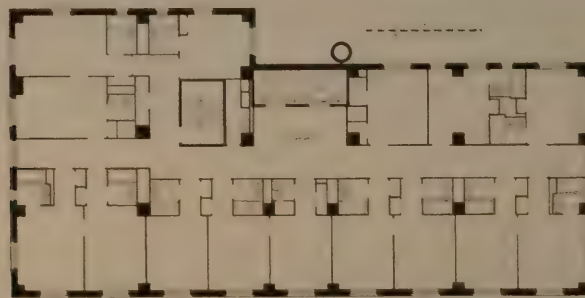
Auditorium Hotel

Houston, Texas

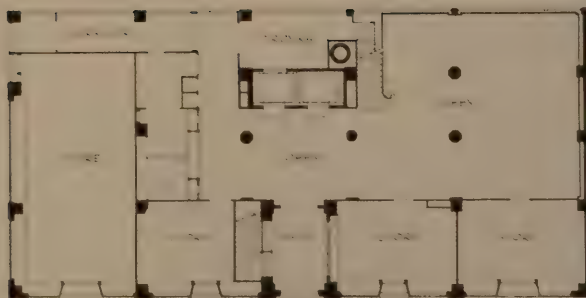
Joseph Finger, Architect

THIS attractive commercial hotel recently constructed in Houston, Texas, is 12 stories in height and contains 165 guest rooms, practically all being equipped with baths or showers. The building is of steel and concrete construction with exterior of light face brick and stone trimmings. The ground floor contains four stores and a large two story lobby space. A lounge is arranged on the mezzanine floor as shown below.

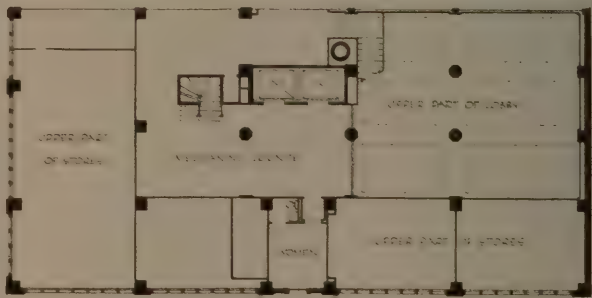
The complete contract for the Furnishings and Equipment of the Auditorium Hotel was executed by the PICK-BARTH Companies.



Typical Floor Plan



Main Floor Plan



Mezzanine Floor Plan

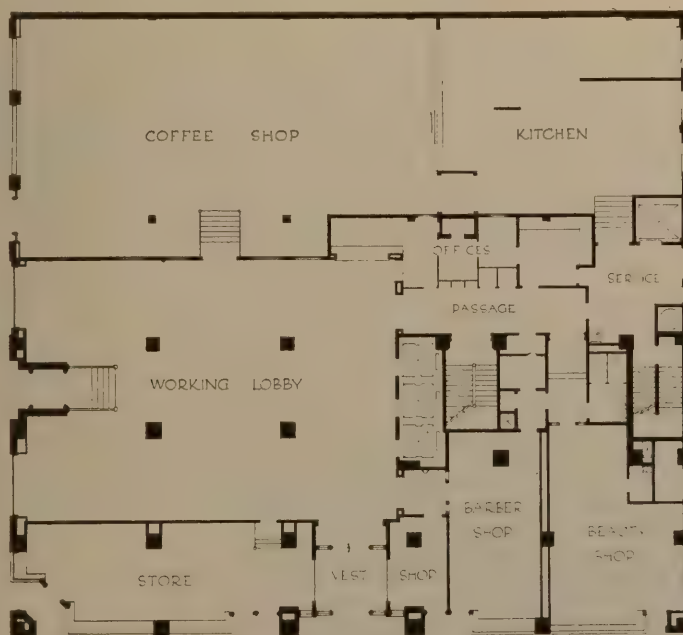
Hotel Robert E. Lee

St. Louis, Mo.

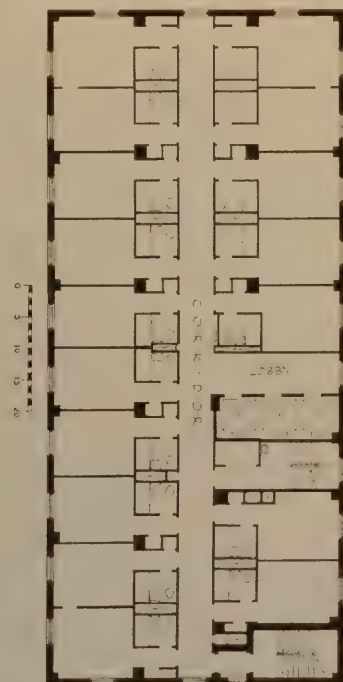
*Alonzo H. Gentry
Architect*

THE Hotel Robert E. Lee is a fourteen story building of fire-proof construction and contains 250 rooms, all with bath. Only the main floor occupies the whole lot, the other thirteen guest room floors being of smaller area thereby permitting an abundance of light and air on all sides. Besides the lobby on the main floor, there are four shops and a coffee shop and kitchen. The building is served by three high speed elevators.

*The complete contract for the
Furnishings and Equipment of
the Hotel Robert E. Lee was
executed by the PICK-
BARTH Companies.*



Main Floor Plan



Typical Floor Plan

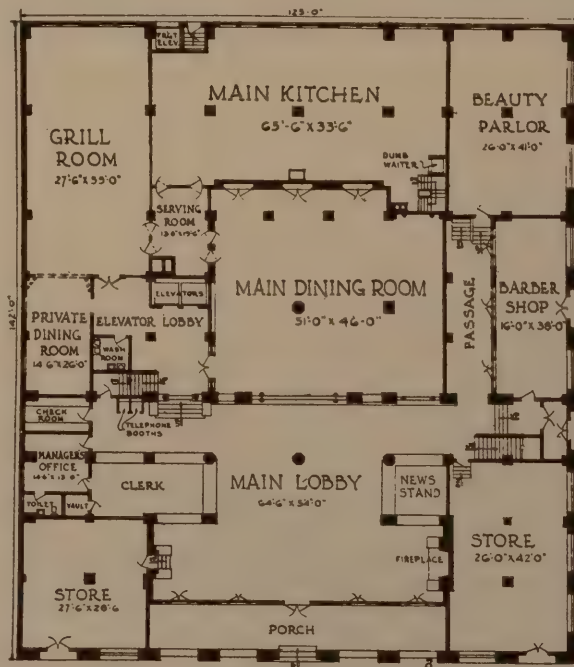


Hotel Franciscan, Albuquerque, N. M.

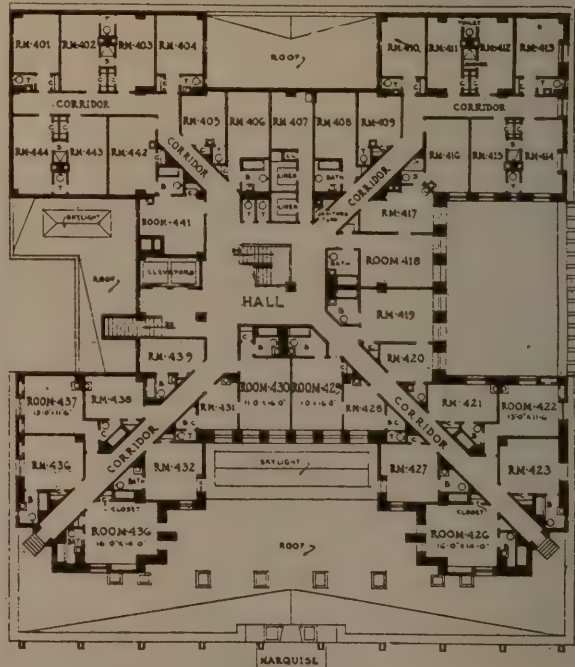
Trost & Trost, Architects

A COMMERCIAL hotel containing 149 guest rooms. The unusual architecture of this hotel influenced by the Pueblo style is characteristic of local tradition.

The complete contract for Furnishings and Equipment was executed by the PICK-BARTH Companies.



First floor plan



Fourth floor plan

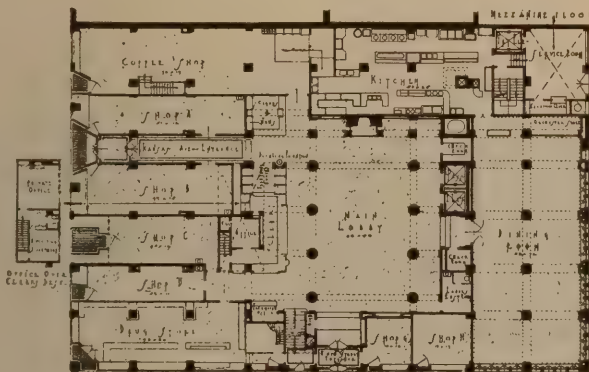


Hotel Kansan, Topeka, Kan.

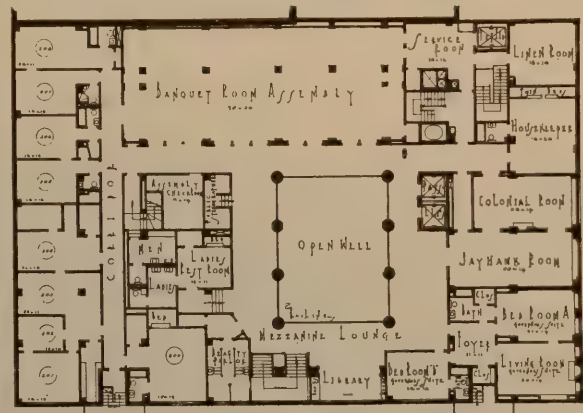
Shepard & Wiser, Architects

THIS commercial hotel containing 304 guest rooms was completed in 1922. The construction is reinforced concrete with brick and tile walls and gypsum block partitions. Exterior is of face brick with cast stone trim.

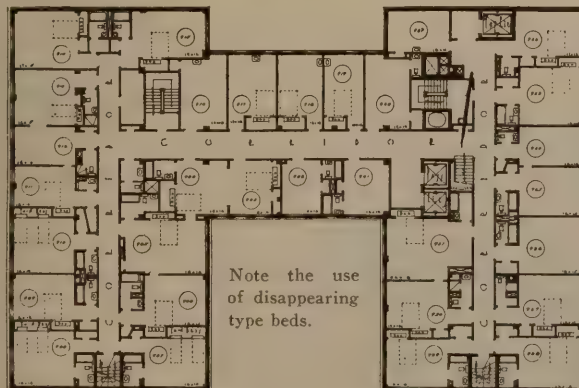
Completely Furnished and Equipped by the PICK-BARTH Companies.



Main Floor



Mezzanine Floor



Sample Room Floor



Typical Guest Room Floor

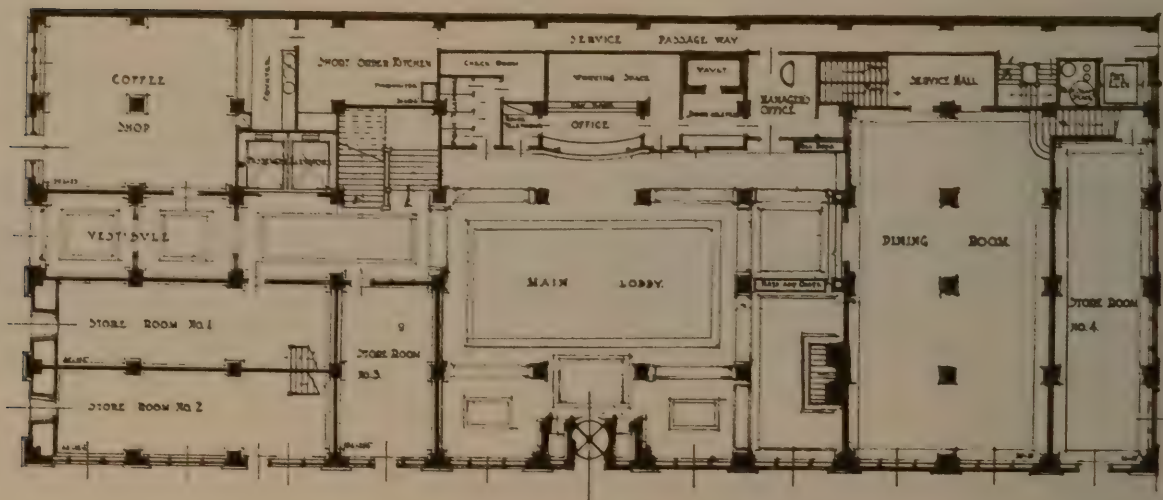
Hotel La Salle

South Bend, Indiana

Nicol, Scholer & Hoffman, Architects

A COMMERCIAL hotel built in 1922 and containing 275 rooms of which 75 per cent have baths, this building is of steel and concrete construction with exterior of face brick and cast stone trim. It is considered an exceedingly good example of medium sized hotel planning.

The complete contract for Interior Decoration, Furnishings and Equipment was executed by the PICK-BARTH Companies.



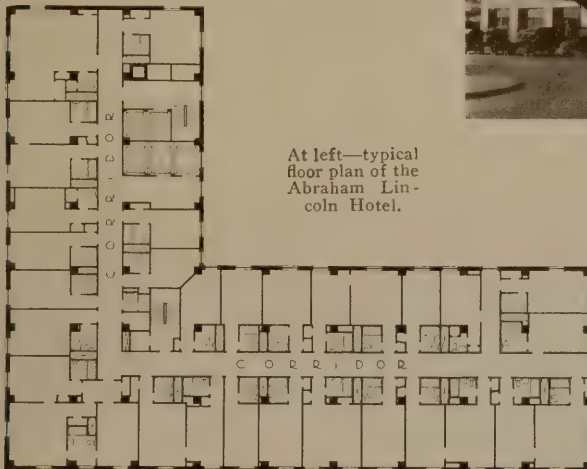
Plan of Main Floor Shown Above—Typical Guest Room Floor Below



The Abraham Lincoln Hotel

Springfield, Illinois

THIS is a commercial hotel which is representative of the type of plan which is needed to meet the requirements of a small but active industrial city in the Middle West. This is practically a 12-story building constructed with exterior facing of limestone and limestone trim with face brick. The plan has been arranged to meet the various requirements of a community hotel of this type and also has been efficiently arranged to take advantage of all sub-rental possibilities. The location of the hotel is such that an excellent opportunity was afforded for introducing sub-rental space in the form of six small stores and one large corner store as shown on the ground floor plan below. The ground floor plan is, therefore, largely given over to sub-rental space and to a large cafeteria, so that almost the entire area of this floor is of a fully productive nature. Very little space has been taken for entrance, but each entrance has been so well accentuated with marquees that the store fronts do not submerge the identity of the building from the viewpoint of the passerby. The main floor is given to well arranged public space, the lounge, dining room, kitchen, etc., and part of another floor is used for ballroom and private dining rooms. The typical floor plan indicates the general layout in which every room has a bath.

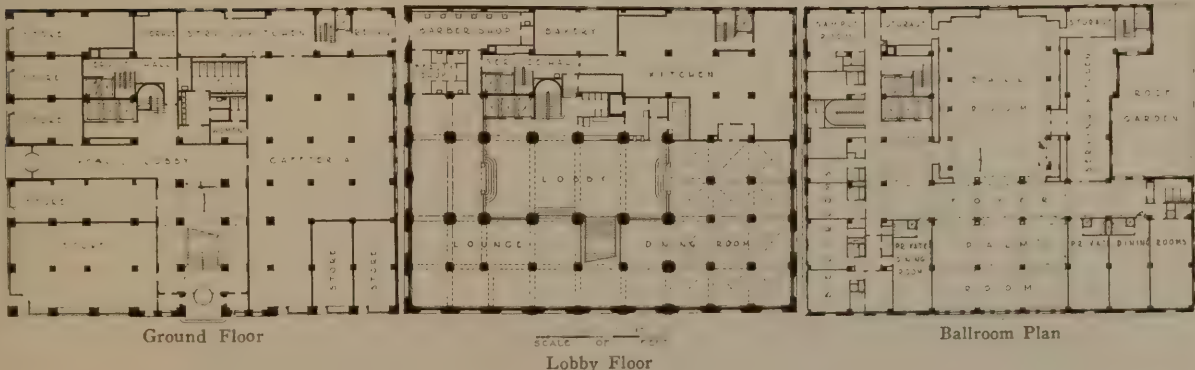


At left—typical floor plan of the Abraham Lincoln Hotel.

Helmle & Helmle, Architects

The complete contract for the Interior Decoration, Furnishings and Equipment of the Abraham Lincoln Hotel was executed by the PICK-BARTH Companies.

SCALE OF FEET
0 10 20 30 40 50



Ground Floor

Lobby Floor

Ballroom Plan

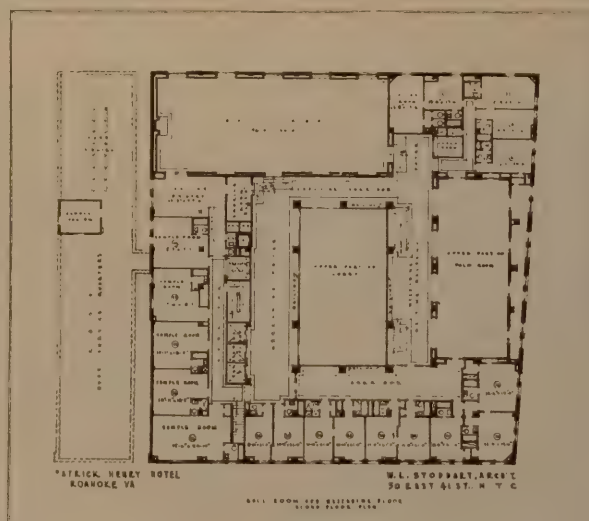
Hotel Patrick Henry, Roanoke, Va.

Wm. L. Stoddart, Architect



THE Patrick Henry was completed in December, 1925, and consists of 300 rooms, each room having a bath or shower.

THE Food Service Departments of the Patrick Henry were planned and equipped by the John Van Range Company (affiliated with the PICK-BARTH Companies).



Mezzanine (Ballroom) Floor

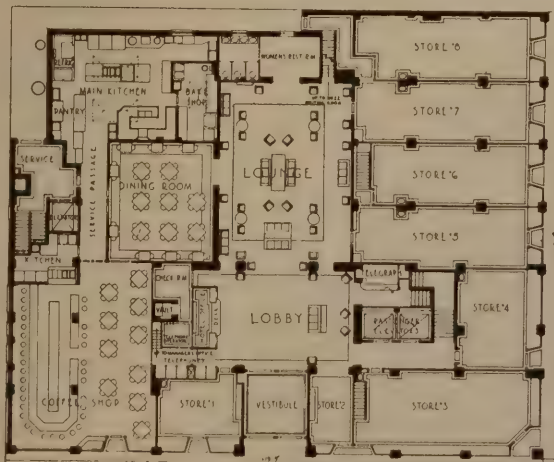


Typical Guest Room Floor



Auditorium Hotel, Cleveland, Ohio

George A. Ebeling, Architect



Main Floor Plan

A COMMERCIAL hotel of 297 rooms, each with bath, and including ten sample rooms. Construction of steel with thin floor slabs. Exterior walls of brick and tile.

It was completely Furnished and Equipped by the PICK-BARTH Companies.



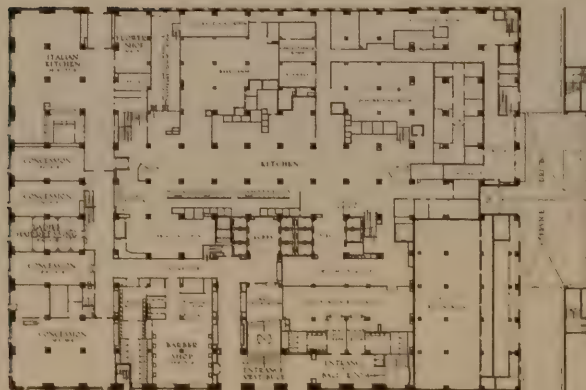
Typical Floor Plan



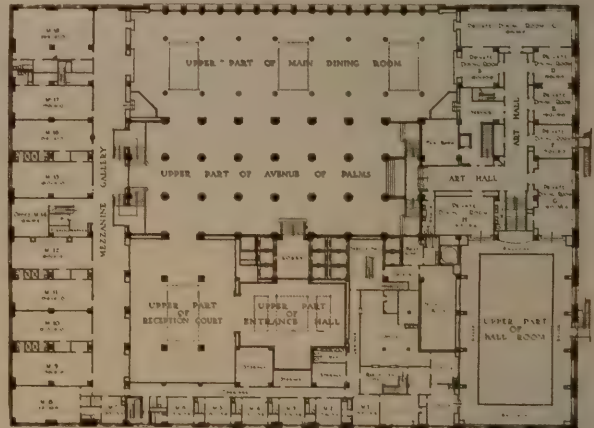
The Drake Hotel, Chicago, Ill.

Marshall & Fox, Architects

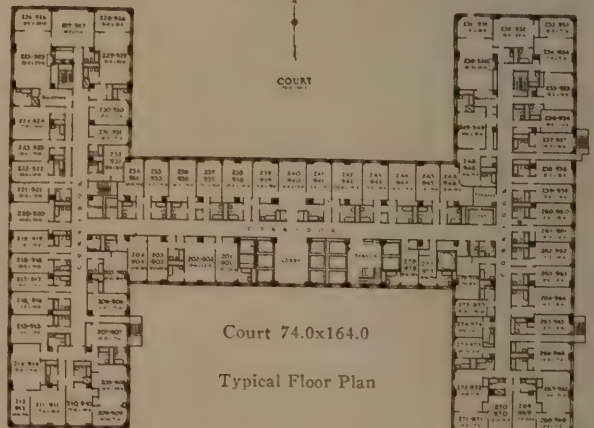
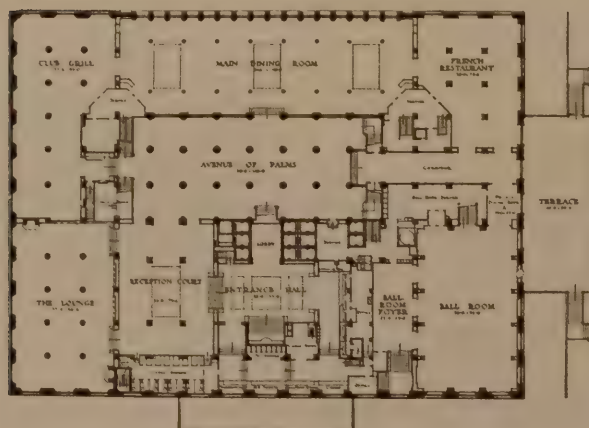
The beautiful kitchens of the Drake Hotel were Planned and Equipped by PICK-BARTH Engineers.



Above—Ground Floor; Below—Main Floor



Mezzanine Floor



Court 74.0x164.0

Typical Floor Plan



Painting from the PICK-BARTH Interior Decoration Studios

Solarium of the Ponchartrain Apartments
New Orleans, Louisiana

Planning the Hotel's Furnishings

The interior decoration and furnishing of a hotel, like its architecture is a highly specialized task because of the peculiar conditions involved in hotel operation. Unfortunately the importance of these conditions is much less understood or appreciated than it deserves to be—in fact, even among experienced hotel men, ideas on this subject are hazier than on almost any other phase of operation. In a way this is natural because the handling of interior decoration and furnishing not only is not a science but appears to approach toward an art, and anywhere that artistic and creative effort must be applied to a business operation, the business man finds himself on less sure footing.

The hotel business is so highly advanced today that people take it for granted that mere comfort will be provided for them. The competition for their patronage as a consequence is more and more fought out through appeals to love of luxury and beauty.

The American public has awakened in an amazing way to an appreciation of beauty in the home. Fine furniture, objects of art, antiques and tastefully treated interiors have become matters of universal interest and homes are being furnished with a much keener eye to good taste than ever before. Coming from well furnished homes, guests are naturally attracted to good surroundings elsewhere.

The hotel thus finds itself forced both by popular taste and by competition to give such unusual attention to its furnishings that they will prove a positive force for bringing and holding business rather than merely providing for bodily comfort.

Exceptional success many a time has been the reward of clever playing upon this growing public appetite for fine surroundings. Probably no stronger example could be given than the case of the big modern bachelor hotels. These cater to a patronage far less affluent than the ordinary commercial or apartment hotel. The rooms are small in the extreme and are rented at prices that are within the reach of men and women of very modest income. Yet turn to the illustrations of the Webster Hall, Pittsburgh on pages 233 to 236, and see the extent to which the management has gone to provide an atmosphere of luxury and even sumptuousness in the public rooms. The unusual success of this hotel is evidence that its furnishing policy was a sound piece of business. Consider too the masterful showmanship which has dictated the treatment of our famous "movie palaces." Even though these theatres have not always kept their desire for striking interiors restrained by the best of taste, there can be no doubt that they have sounded the popular note with great insight and with huge financial success.

When carrying out the decorative treatment and interior architecture to secure an effect on the public, the matter of individuality is a thing to be

given a great deal of thought. Distinctiveness in the furnishing of a hotel is a benefit in much the same way as with its name. Such names as "The King Cotton," "The Cornhusker," "The Half Moon," "The Mayflower," and "The Seminole" are more than mere tags of identification. They are living things with a strong power to strike the imagination. A hotel's interior decoration and furnishings can bring the same result, and to attain such individuality usually costs no more than to do the ordinary thing. No one who has ever stopped at the Franciscan Hotel, at Albuquerque, New Mexico, for instance, is likely to forget it. Its clever adaptation of the decorative, and architectural motifs furnished by its locality and historical background (see pages 204 and 267) makes it stand out from any other hotel in the country. Perhaps this seems like an extreme case, but it seems more so than it really is. There are hundreds of hotels in other communities which have overlooked opportunities just as good. Too frequently a commonplace decorative scheme is accepted where a little imagination could have created something far more effective.

Treatment of Public Rooms

In the interior decoration and the furnishing of transient hotel lobbies and lounges it must be considered that entirely aside from their purpose as operating departments, they serve as an introduction to the hotel, and are the places which give the patron his first impressions. Their treatment therefore should be such as to give an impression that is truly representative of the house.

This does not necessarily imply that they should be displays of lavishness. Large metropolitan hotels which are expected to provide a setting for a sophisticated social life can give a free hand to the decorator with talents for the ultra luxurious. The medium priced commercial hotel, however, catering to the general run of business patronage might suffer from such treatment because its guests desire restful and natural surroundings and a lack of what to them seems like undue ostentation and "swank."

In every case a studied effect should be created which will make your particular class of patrons feel at ease. Perhaps it will flatter them a bit, and it certainly should present an atmosphere that will compare favorably with their normal surroundings, but it must not go too far above their heads, nor be of the wrong type, or it will defeat its purpose.

Apartment hotel lobbies and lounges are not "public" rooms in just the same sense as with transient hotels, but are partly semi-public additions to the guests' living quarters. Here the lobby, elevators and front office are often like an entrance foyer with the lounges very much separated and treated as distinct rooms, to give greater privacy.



The Interesting Lobby of the Bismarck Hotel, Chicago, Ill.

Resort hotels may be arranged along the general lines of either apartment or transient hotels depending upon individual conditions, and as a rule they have much larger amount of space given over to public lounges.

The dining rooms of a hotel offer more latitude to the decorator than other public spaces. Whereas public rooms should be furnished in a manner that is not too extreme, there is less objection to unusual decorative schemes in dining rooms. In fact most people (almost all women) thoroughly enjoy eating amid novel surroundings. We therefore find Spanish, Italian, French, Dutch, Japanese, Chinese, Oriental, Roman, Egyptian, Indian and countless other styles of rather extreme character employed to good advantage particularly in the secondary dining room, tea rooms, soda grilles and lunch rooms. Of course strong schemes of decorations must not be overworked nor used to the exclusion of more conservative effects or an atmosphere of uncomfortable artificiality will be felt.

No attempt will be made here to go into principles of architecture, interior decoration or styles, periods and modes of furnishing. These are matters to be treated individually for each project. We therefore will restrict our discussion to the things about hotel operation which have an important bearing upon the furnishing methods used. We have, however, shown a large number of photographs and sketches which serve to illustrate the methods employed in handling rooms of different types. Among them will be found special groups of Lobbies, Lounges, Dining Rooms, Ballrooms and other public rooms

in commercial, resort and apartment hotels, showing the distinctive characteristics of each. These public rooms, selected from hundreds executed by the PICK-BARTH Companies, comprise an excellent exhibit of successful hotel furnishing treatment and will repay careful study.

Treatment of Guest Rooms

The public rooms are decorated and furnished mainly with the thought of visual effect. Guest rooms, in contrast, must emphasize comfort and convenience. A guest room is a home; it should therefore be furnished to give the atmosphere of a home. It is however profoundly affected in its furnishing by the special conditions of hotel operation which unfortunately are hard to reconcile with a pleasing effect. To produce rooms that are both homelike and practical can be done, but it is no task for the novice. Every error in practical judgment is so multiplied by the number of rooms that it assumes serious proportions.

Inexpert handling of the problem generally affects commercial hotel and apartment hotel rooms in opposite ways. In commercial hotels, the surrender is most often to the practical influence and the cold and barren rooms which are the bane of the frequent traveler's life are the result. In apartment hotels the striving for a homelike effect (usually combined by a less thorough understanding of hotel operating requirements on the part of the owner) often results in a selection of furnishings

which appear fairly well to begin with but which are entirely unfit from a practical standpoint.

As to style, commercial hotel guests rooms must not, of course, be too extreme. Yet within the limits of both desirability and practicality there is abundant room for definite character—and character there certainly should be. Even though the bedroom suite may be quiet and conservative, notes of color and cheerfulness may be given by the upholstered furniture, drapes, bedspreads, lamps and other accessories. Cold bare walls are particularly to be avoided, and if no pictures are used, their lack ought surely to be offset by an interesting treatment of the walls which will relieve any flat and inhospitable effect. The variety of room treatments which should be provided and the amount of furniture in the different classes of rooms are of the greatest importance. No hard and fast rule can be applied here as it is a matter of judgment of the individual case in the light of the furnishing specialist's experience. (Interesting commercial hotel guest rooms treatments are illustrated on pages 238-239.)

The guest rooms of apartment hotels and furnished apartment buildings should be handled in a different tone. Although the practical considerations are no less important, there is an increased need for attention to variety and relief. It must be remembered that while conservative furnishings are entirely satisfactory where occupancy is of short duration, under a long period of residence they become cheerless and oppressive.

Residential apartments need furnishing treatment which makes a positive appeal to the guest's taste.

This leads to brighter and more definite styles and also a greater variety of types to choose from, in order to compensate for varying tastes.

Lack of attention to the smaller furnishing accessories has spoiled many otherwise pleasing apartments. Lamps, pictures, vases, clocks, and like things are what transform a room with some furniture into a *home*. Lighting effects deserve particular mention. A strong central light in a living room strikes a jarring note that almost no amount of good furnishing can counteract. Soft and restful lights should be spotted in pleasing locations—usually more by lamps than from ceiling or wall lights. Lighting fixtures should not be prominent or heavily ornamented.

Your attention is called to the illustrations of living rooms and bedrooms on pages 240, 241, 242 and 243. These show the handling of furnishings in representative apartment hotels and furnished apartment buildings of various classes.

Corridors, Foyers and Hallways

Many hotels seem to be furnished under the impression that the interior decoration of corridors, elevator lobbies etc., consists of nothing much more than laying a carpet. We would suggest that this be given a little more thought. These passageways are so much in use that they deserve a less bare appearance than most of them have. Wall treatments and lighting effects are among the neglected factors. The inclusion here and there of chairs, benches, davenport, mirrors, pictures and lamps



Main Lobby, The Park Central, New York

An Example of Careful Planning



The King Cotton

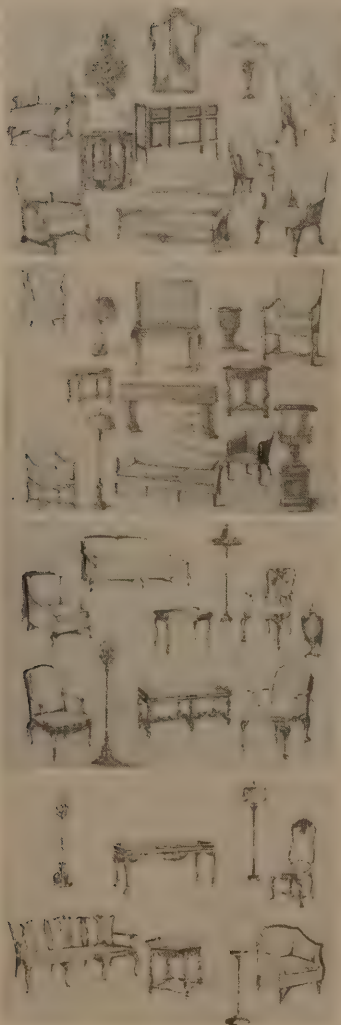
Greensboro, N. C.

John B. Peterkin, Architect

Interior Decoration and Furnishings by the PICK-BARTH Companies.

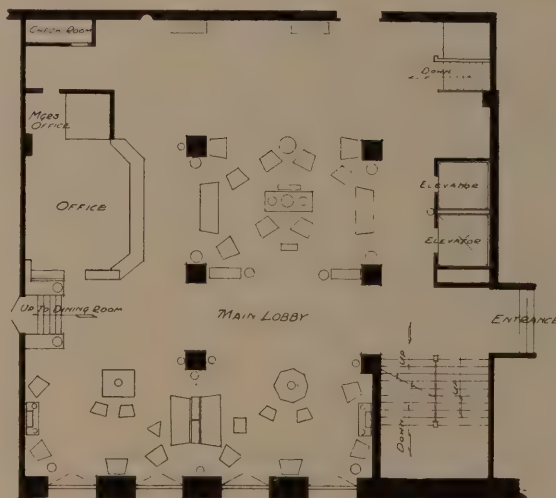
THE illustrations on this page serve to show the thoroughness with which every detail of the interior decoration and furnishings of the public rooms were planned by the PICK-BARTH Specialists. The view above is a perspective painting of the lobby and lounge and is shown in full colors on page 221 of this book.

SUCCESSFUL hotel furnishing effects do not just "happen." They are the result of clearly worked out schemes in which general effect, color harmony, period of design, mass, height and grouping of furnishings and their relation to the dimensions and architecture of the rooms are carefully reconciled with the practical demands imposed by hotel operating conditions. An experienced hotel interior decorator lays his plans with the same precision as an architect or engineer.



FROM the perspective painting above and the furnishing floor plan at the bottom of this page together with the four plates (at left) showing each of the individual pieces used in the room, the owners of the King Cotton were able to see with absolute accuracy just how their public rooms would appear when completed.

HOW accurately these plans were carried out may be seen by the photograph shown at the right, and those on page 273.



THE exhibit on this and the following page affords a graphic idea of the thorough and sure-footed methods of PICK-BARTH specialists. The most important work of these men, however, cannot be seen in pictures, for it represents the thought and study behind the plans by men who through years of constant contact with hotel problems have built up a priceless store of experience and technical knowledge. In the hands of these men the complete outfitting of the hotel from cellar to roof is handled as a unit—taking the project when it is a bare building and turning it over to its owners a hotel complete in every detail and ready for operation.

of Furnishings for a Commercial Hotel

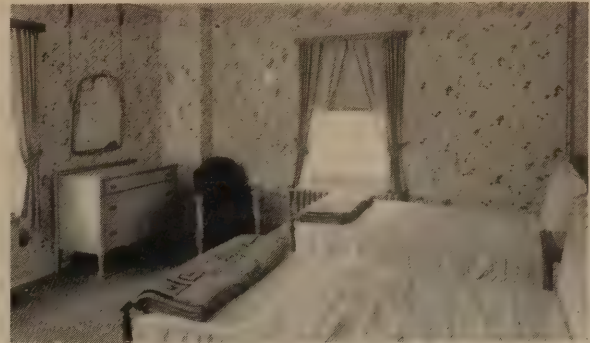


The upper one of these two views shows the plan for interior treatment and furnishing of The King Cotton Ballroom. The lower view is a photograph of the room as it finally appeared, illustrating the accuracy with which the plans were carried out.

Showing the interior decoration sketch from the PICK-BARTH studios, and an actual photograph of the finished dining room of The King Cotton—again illustrating the faithful execution of the original plans.



A single bedroom in The King Cotton



A double bedroom in The King Cotton



THE furnishing plan of a typical guest room floor of The King Cotton, Greensboro, N. C., as prepared by the PICK-BARTH Furnishing Specialists. These men not only planned the furnishings, but once their proposal was approved, actively

handled the providing of everything required to carry out their plans down to the smallest detail,—which included the skillful and orderly installation of the furnishings, floor by floor until the hotel was ready for occupancy.

Treatment of Commercial Hotel Lobbies



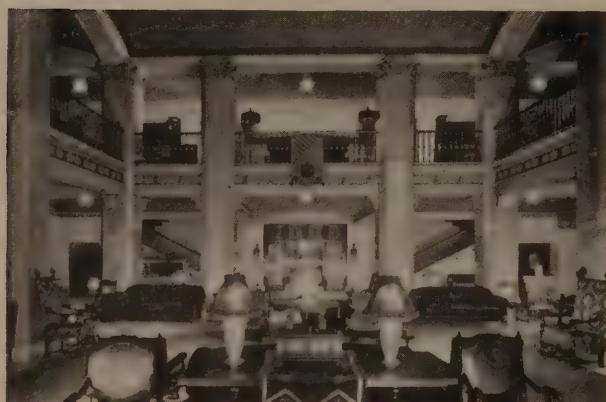
Lobby of the Hotel Ft. Armstrong, Rock Island, Ill.



Hotel Northland, Green Bay, Wis.



Robt. E. Lee Hotel, Kansas City, Mo.



Hotel Washington, Shreveport, La.



Eldridge Hotel, Lawrence, Kan.

helps greatly. A collection of photographs of well handled corridors, entrances and passageways is shown on page 225.

The Economic Side of Furnishing

So far we have spoken of hotel furnishing mainly from the standpoint of the effect upon the guests. Let us now examine it from the practical angle of hotel operation.

Whatever a hotel does it does to make money. Financial considerations influence every move that is made. If they were not present, hotel furnishing would simply be an artist's work. With business influences to deal with in addition to artistic talent it becomes a task for highly trained specialists.

The principal economic considerations that bear upon hotel furnishing are:

1. Amount of money available for furnishings.
2. Cost of furnishings (not the initial cost, but the cost over a period of years, as evidenced by actual depreciation).
3. Cost of maintenance repair and upkeep.
4. Suitability of furnishings for special hotel purposes.
5. Handling of planning, purchasing and installation.

Touching upon each of these things in turn we will see how they influence the method of furnishing the hotel.

Determining Amount to Be Spent

The well organized hotel project will approach its furnishing problem on the basis of a pre-determined budget set up in connection with its financial organization. While the amount decided on always hinges on the hotel's available capital, it should always be based upon a careful survey. Superficial



Lobby of the Vinoy Park Hotel,
St. Petersburg, Fla.

budget estimates do more harm than good and many a hotel man has been in hot water in consequence. At best they lead to illogical and unbalanced buying, and they often cause financial disaster to both owner and bondholders.

There really is little reason for getting into this kind of trouble. If you have a competent architect and are dealing with a financing organization ex-

Continued on page 225



Lobby of the Floridian Hotel, Miami Beach, Fla.

Treatment of Apartment Hotel Lobbies



Lobby of The Warwick, Philadelphia, Pa.



Park Lane Villa, Cleveland, Ohio



The Seville Apartments, Detroit, Mich.



The Georgian, Evanston, Ill.



The Woodmere, Chicago, Ill.



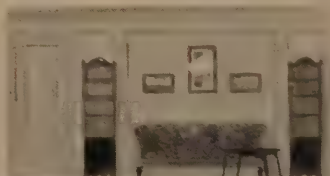
Painting from the 1880s-1890s by Anderson, Decoration Studio

Lobby of the Hotel King Cotton, Greensboro, N. C.



Painting from the PICK-BARTH Interior Decoration Studios

Lobby of the Leverich Towers, Brooklyn, N.Y.

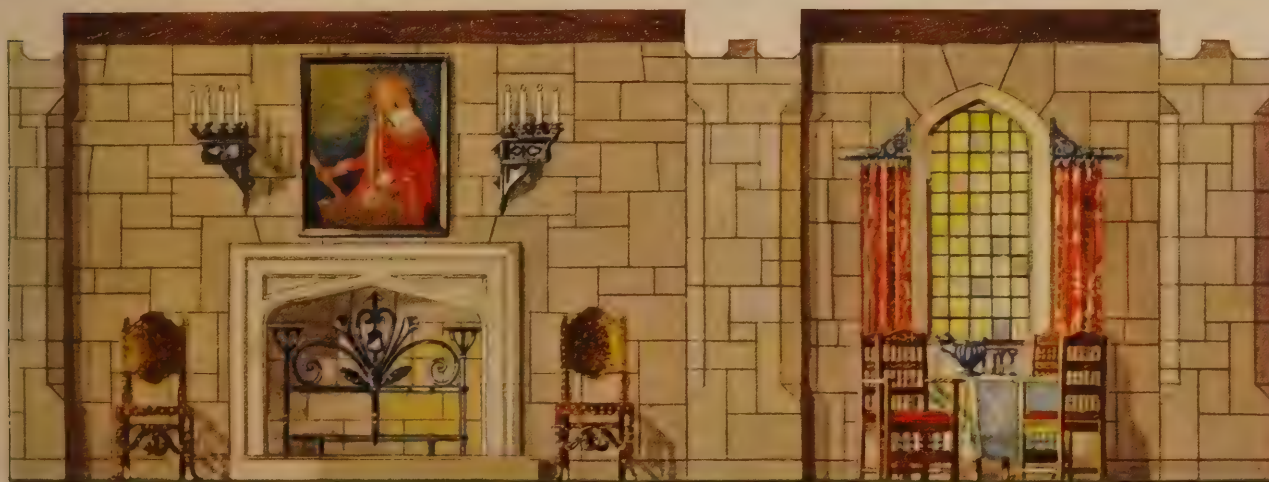


The plan and wall elevations above (prepared by the PICK-BARTH furnishing staff) show the furnishings and interior treatment of a typical apartment living room. Before the hotel was furnished, sample rooms were set up and furnished completely to demonstrate the exact results to be obtained



THE illustrations on this and the following page are part of the Furnishing and Interior Decoration plans for this hotel prepared and executed by the PICK-BARTH staff of hotel specialists. These plans embraced everything required for the complete outfitting of the hotel, from the furniture, carpets, drapes, lamps, objects of art, linens, bedding, chinaware, glassware, silverware, kitchen equipment down to the smallest accessory. While the contract executed for the Leverich Towers was a very large one, smaller projects, however, receive exactly the same careful planning in the hands of the same experienced staff of men.

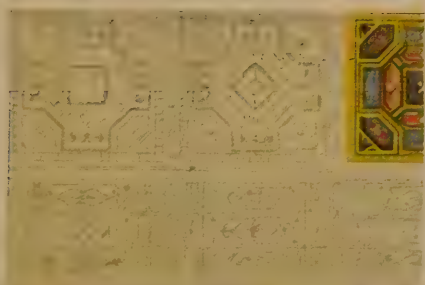
The floor plans and exterior view of the Leverich Towers are shown on page 74 of this book



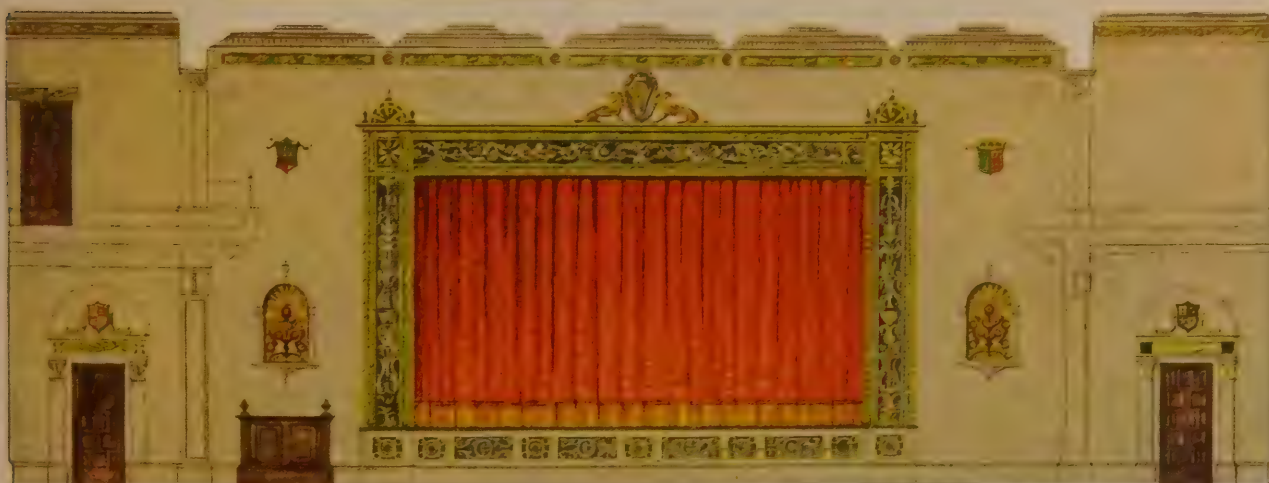
Leverich Towers

Brooklyn, N. Y.

*Paintings
From the
PICK-BARTH
Interior
Decoration
Studios*



THE paintings reproduced on this page show two public rooms designed by PICK-BARTH interior decorators. The upper view is an interesting grill room treatment and the lower (reproduced on a smaller scale) shows the ballroom and banquet hall done in a style which offers a pleasing relief by the use of gay color and distinctive style.





Painting from the PICK-BARTH Interior Decoration Studios

Venetian Dining Room, Hotel Book-Cadillac, Detroit

perienced in hotel matters your chances of avoiding complications ought to be good, for they should be able to approach the formation of a budget in the light of known experience and with the help of outside specialists with which they are in contact. In the absence of experienced counsel, redoubled vigilance should be used, and preliminary estimates should be requested on every important phase of the hotel.

The PICK-BARTH Companies are very commonly called in by owners, architects and financial houses to assist in budget figuring. The estimates supplied at such times are carefully based upon actual experience in projects of a similar nature—the only safe method to employ.

Although budget estimates should always be made in the light of individual conditions a number of examples of such costs are given in the book and will be found on pages 40, 104 and 147.

With an intelligent budget decided on, the next task is to invest this money in furnishings which will give the best possible effect and the maximum of service.



Lobby of The Belcrest Apartment Hotel, Detroit, Mich.

Selecting Furnishings for Minimum Depreciation

This is the critical point in the furnishing of any hotel from the practical angle.

It is hard to speak of the effect of hotel operation upon furnishings without resorting to superlatives. No other type of establishment subjects furnishings to greater punishment and rare indeed are the cases where conditions are as severe as in hotels. Night and day for three hundred and sixty-five days in the year a busy hotel is entertaining crowds of guests

who throng into the lobby, pour into the dining rooms, tramp up and down corridors, live in the guest rooms, and the resulting wear and tear, use and abuse are unique in their severity.

Now, nearly everybody knows that this condition exists. You can hardly walk through a hotel without seeing concrete evidence of it. In view of this it may amaze you to know that millions of dollars are invested by hotels in products which were designed for ordinary household use, where wear and tear are many times less severe!

Treatment of Foyers, Entrances, Passages, Etc.



Elevator Lobby, Bismarck Hotel, Chicago, Ill.



Foyer, Hotel Floridian, Miami Beach, Fla.



Foyer and Hallway, Webster Hall, Detroit, Mich.



Foyer, Hotel Altamont, Hazleton, Pa.



Stairway and Foyer, The Warwick, New York

Examples of the Furnishing



An Attractive Reception Room Group in The Warwick, New York



Lounge, Pearson Hotel, Chicago, Ill.



Lounge, Vernon Manor, Cincinnati, O.



Lounge, Arlington Apartment Hotel, Chicago, Ill.



Lobby Lounge, Eldridge Hotel, Lawrence, Kan.

of Lounges and Waiting Rooms



Auditorium Hotel, Cleveland, Ohio



Astor Hotel, Milwaukee, Wis.



The Pontchartrain, New Orleans, La.



Hotel Floridian, Miami Beach, Fla.



The Park Ave. Hotel, Detroit, Mich.



Fenway Hall, Cleveland, Ohio

Mezzanine Parlors and Writing Rooms



Hotel Eitel, Chicago, Ill.



The Warwick, Philadelphia, Pa.



Hotel Retlaw, Fond du Lac, Wis.



Hotel Floridan, Tampa, Fla.

Is it conceivable that the things which were made for use in a private home could stand the treatment they would get in a hotel?

You know, for instance, that dishes cannot. Think what would happen to the china in your home if put through a single day's service in a restaurant. There wouldn't be enough left to serve many meals with!

You probably know too that linens cannot. The constant laundering alone would quickly destroy the delicate fabrics used in the ordinary home.

The condition does not end with these two. For furniture, carpets, drapes, and all the hundred and one other products used are treated just as roughly in comparison. At a conservative estimate, 95% of hotel products receive treatment from five to ten times as destructive as in the home, and there are plenty of cases where the contrast is even greater.

A Safe Precedent

If you wish to avoid the most unnecessary losses in hotel furnishing take a leaf from the book of dearly paid-for hotel experience and make this the first guiding policy of your purchasing:

Never, never use a product that is not designed and manufactured expressly for hotel use.

Apply this to everything you use from cellar to roof. Discard anything that does not so qualify. It will invariably pay.

And even within the limits of so called hotel merchandise there is considerable variation in quality. While each grade may have its merits under some conditions of service, the element of comparative *value* (in view of lasting qualities) and not comparative initial *cost* should be the deciding factor in making a selection.

Quite frankly, the average buyer of hotel furnishings is acting rather in the dark—not so much because differences in quality among furnishing commodities are hard for the layman to detect (although this is a factor) as because he does not take enough trouble to understand what quality he is getting and does not realize how great a difference in length of service small variations in construction and materials can make. This error of viewpoint leads to the buying of price instead of economic value.

It is true that the judging of furniture, carpets, fabrics, etc., is expert work and involves many subtle considerations that the ordinary business man is unfamiliar with. But the layman doesn't need to be totally at a loss. Anybody with two eyes and common sense can learn enough about the major points of distinction to serve his purpose. In following chapters you will find a discussion of quality and construction of furnishing commodities in the light of hotel conditions and a careful study of this material is recommended.

Continued on page 232

Treatment of Ballrooms and Banquet Halls



An Interesting Banquet Hall in the Hotel Loraine, Madison, Wis.



Washington Hotel, Shreveport, La.



The Warwick, New York



The Beautiful Ballroom of the Park Lane Villa, Cleveland, Ohio

Representative Examples of the



The Francis I Cafe, Hotel Book-Cadillac, Detroit, Mich.



Dining Room, Hotel Randolph, Milwaukee, Wis.



Dutch Room, Hotel Bismarck, Chicago, Ill.

Furnishing of Dining Rooms



The Warwick, New York



Hotel Grim, Texarkana, Ark.



Vinoy Park Hotel, St. Petersburg, Fla.



Hotel Francis Marion, Charleston, S. C.



The Main Dining Room of the Washington Hotel, Shreveport, La.



Two of the Private Dining Rooms in the Hotel Bismarck, Chicago, Ill.

Selecting Furnishings for Low Cost of Upkeep

Every guest expects to occupy quarters which give no suggestion of former occupancy. If he is displeased in this respect he characterizes the hotel as either dirty or run down.

This obliges the hotel to use furnishings which retain their original appearance just as long as possible, and which can be cleaned or renovated successfully at a low cost. Many of the special features of so called "hotel design" have been created to cope with this situation.

The utmost care must be used in the selection of furniture finishes, drapery and upholstery fabrics, carpets, wall treatments, etc., to avoid any which show dirt easily. Fabrics must invariably be viewed from this angle and it will be found that this affects textures as well as colors and designs.

Ease of cleaning and the ability to withstand cleaning processes are of paramount importance. From furniture and fixtures down to china, silver and numerous other smaller accessories, designs

should be adopted which eliminate dirt catching places and which are readily kept spic and span. Draperies, bedspreads and the like must be cleaned or laundered with great frequency. This eliminates many fabrics either because of the high cost of cleaning or because repeated cleaning proves destructive. It also has a decided bearing on how the draperies are made up. Wood surfaces need particularly good finishes, and this applies especially to painted furniture. The same is true of wall treatments. The list of things affected is endless, for the necessity of cleaning is universal. Even though products are otherwise entirely satisfactory, they will prove a poor investment if deficient only from this one standpoint.

The problem of minimizing upkeep costs bears on other things too. It dictates, for example, the selection of products which do not lose their shape or other properties through frequent use (i. e. upholstered furniture). It leads to the protection of furnishings against damage (as with glass dresser tops). It also involves the use of materials which may be washed or cleaned instead of being refinished

Continued on page 239



A luxuriously appointed Private Dining Room in the Wade Park Manor, Cleveland, Ohio



Small Banquet Hall or Private Dining Room in the Georgian Hotel, Evanston, Ill.



Painting from the PICK-BARTH Interior Decoration Studios

Entrance Lobby of Webster Hall
Pittsburgh, Pennsylvania



Painting from the PICK-BARTII Interior Decoration Studios

Main Lounge, Webster Hall, Pittsburgh



ALBERT PICK COMPANY
STUDIOS

Painting from the PICK-BARTH Interior Decoration Studios

Men's Lounging Room, Webster Hall, Pittsburgh



Painting from the PICK-BARTH Interior Decoration Studios

Women's Lounge, Webster Hall, Pittsburgh

Treatment of Men's Lounges and Smoking Rooms



Webster Hall, Detroit, Mich.



Quad Hall, Cleveland, Ohio



Webster Hall, Detroit, Mich.



Oak Park Arms, Oak Park, Ill.

Treatment of Women's Retiring Rooms



Hotel Book-Cadillac, Detroit, Mich.



The Warwick, New York



Eldridge Hotel, Lawrence, Kan.

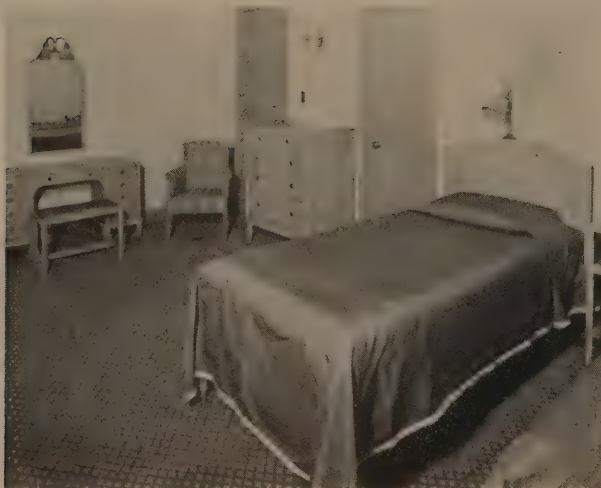
Commercial Hotel Bedrooms



Hotel Loraine, Madison, Wis.



Hotel Bismarck, Chicago, Ill.



Hotel Book-Cadillac, Detroit, Mich.



Hotel Roosevelt, New Orleans, La.



Hotel Greystone, Bedford, Ind.



Hotel Richard McAllister, Hanover, Pa.



Hotel Ritz-Carlton, Boston, Mass.

or replaced. Many other instances could be given if space permitted.

Special Requirements of Hotel Operation

Under this heading comes the very large number of cases where a need of hotel operation has caused the devising of products of special design or construction. So large a variety of items are involved that they can only be briefly mentioned, but all of them are vitally important from a practical standpoint. Among the things included are those designed to give special convenience (as in hotel desks

and other special furniture); those which give added facilities in smaller space (as in disappearing beds, dressing room and kitchenette equipment); those which discourage theft (as in towels, etc., woven with names); things with advertising value (as in crested articles, table linens, bedding etc.), to mention only a few. It also embraces almost everything connected with food service, as well as numberless small specialties.

The provision of furnishings which satisfactorily answer these two last economic demands,—to keep maintenance at a low point and to answer special hotel purposes is a responsibility which should rest upon those from whom you buy. The extent of their experience and the degree to which they spe-



Hotel Geo. Vanderbilt, Asheville, N. C.



Hotel Wausau, Wausau, Wis.

Apartment Hotel Bedrooms



The Warwick, New York



The Georgian Hotel, Evanston, Ill.



The Woodmere, Chicago, Ill.



The Pearson Hotel, Chicago, Ill.



The Mayflower, Washington, D. C.



The Mayflower, Washington, D. C.



Wade Park Manor, Cleveland, Ohio



The Warwick, Philadelphia, Pa.

cialize in outfitting hotels will be the gauge of your ultimate satisfaction.

This applies, in fact, to all of your problems of furnishing and outfitting, for the supplying of merchandise for your hotel is only one-half of the job of the hotel furnisher. The planning and service which must go with the merchandise is just as great a part of the transaction. Thus we are led to the final question—where you should go for your furnishings and your furnishing plan.

Let us assume that you have settled the architecture and construction of your hotel and are ready to consider the question of buying furnishings, interior decoration, food service equipment and supplies.

This question involves three important things besides the matter of simple purchasing:

(1) How you should organize your purchases, (2) planning what things you should buy, and (3) how the goods should be delivered and installed in the hotel, ready for operation.

Considering these things, then, let us see how others have done.

In general, it may be said that hotels have employed two methods of buying furnishings and equipment—first, “shopping around,” and second, handling their purchases as one complete contract.

Which method should you adopt?

Well, “shopping around” is the older method; in fact, years ago it was almost the only thing that could be done. But it has disadvantages. It throws much unnecessary work on the hotel man; it makes him assume the planning of everything; it takes his time from other important things; it tends to overemphasize price and jeopardize the effectiveness of the result; it usually results in a less harmoniously-furnished hotel, and in the end deluges the operator in a torrent of miscellaneous incoming shipments of merchandise which he then has to install in place—in itself a hard task.

A better way was naturally sought, and as a result came the development of the specialized hotel

Representative Bachelor Hotel Bedrooms



Quad Hall, Cleveland, Ohio



Webster Hall, Detroit, Mich.

Resort Hotel Guest Rooms



Hotel Floridian, Miami Beach, Fla.



Hotel Half Moon, Coney Island, N. Y.



Hotel Floridian, Tampa, Fla.

furnishing and equipment business, making possible contract buying. This has now been adopted by the great majority of hotels.

By this method your complete requirements are included in one contract, which covers the complete handling of everything from the planning and selection of merchandise and the creation of interior decorative effects to the final installation.

The reason for the greater effectiveness of this contract service are:

You hold one concern responsible for everything. It saves you much valuable time and work.

It results in more beautiful and harmonious furnishings, due to unified direction.

You acquire the aid of hotel specialists who bring you the experience of other hotels.

You can arrange your finances better.

You remove the tendency toward unbalanced buying and the sacrificing of one thing for another (as though you bought a \$20.00 pair of shoes, and a \$15.00 shirt, so were forced to wear a \$25.00 suit of clothes). The contract specialist favors no one item, but strives for the best general effect.

You delegate the troublesome task of installation of furniture, carpet laying, drapery hanging, installation of equipment and timely delivery of supplies to one responsible organization.

However, in a contract of this character, you are placing a heavy responsibility. The greatest care should be exercised to assure you that such confidence is well placed.

Thus you come to the question of selecting the furnishing firm.

In making this decision, you should primarily be influenced by the responsibility and reputation of the organization, the character and completeness of its line of hotel merchandise, its experience in hotel furnishing, the character and scope of interior decorating, engineering and other services offered, and its financial stability.

Be sure to make a thorough investigation of these things. Inspect the firm's furnishing work. Inspect their merchandise. Inquire among their customers. Meet their personnel. And when you finally make your choice, you should select one which can bring to you these things:

1. The ability to outfit your hotel in its entirety.
2. Lines of merchandise which are designed primarily for hotel use.
3. An intimate knowledge of the business of hotel operating.
4. A knowledge of the best practices in hotel furnishing and decoration.
5. The ability to originate furnishings and decorative effects that give individuality and beauty—yet which are strictly practical for a hotel.
6. A knowledge of the things which subject hotel furnishings and equipment to severe wear and tear, and a knowledge of how to provide against them.
7. A knowledge of the materials and methods of construction which are *not* suited to hotel use.

Examples of Living Room Furnishing



The Mayflower, Washington, D. C.



The Warwick, New York



The Pearson Hotel, Chicago, Ill.



The Georgian Hotel, Evanston, Ill.



Hotel Half Moon, Coney Island, N. Y.



The Wilmington Apartments, Chicago, Ill.



Park Chambers, New York



Wade Park Manor, Cleveland, Ohio

8. A knowledge of the quantities of merchandise required in all parts of the hotel.
9. The ability to prepare a complete plan and budget for you, covering all products and services involved, in clearly understandable form, and affording perfect assurance that costs are known and under control.
10. The ability to assume full responsibility for the execution of this plan.
11. The services of men long experienced in the handling of such contracts, assuring you that the work will be done thoroughly and on time.
12. An expert staff of food service engineers.
13. A staff of specialists on hotel chinaware, glassware, silverware, linens and similar supplies.
14. A large organization and ample stocks of merchandise.
15. Strong connections with the manufacturers of the most successful hotel merchandise.
16. The knowledge of how to cooperate with your architect and builder on engineering and technical problems.
17. The financial resources to assist you if necessary in your own financing.

No firm that does not measure up to these qualifications is competent to serve you. *Hotel furnishing is strictly a task for experts.* Inexperienced handling invariably proves costly. The vital importance of the technical service to be given demands that you take no chances, and only an organization that can demonstrate to you that it has successfully handled such work merits consideration.

There is one concern in America which stands preeminent in the execution of complete hotel outfitting contracts—the oldest, the largest and the most experienced. That concern is the PICK-BARTH Organization, comprising the affiliated companies, Albert Pick & Company, Chicago, L. Barth & Company, Inc., New York, The John Van Range Company, Cincinnati, The Lorillard Refrigerator Company, Kingston, N. Y., and the "White" Door Bed Company, Chicago. Their corps of trained hotel specialists, reinforced by engineers and technical experts in all departments comprise a service staff which in scope, character and experience is approached by no other organization in this line of business.



Hotel Book-Cadillac, Detroit, Mich.



Hotel Bismarck, Chicago, Ill.



Gallery Lounge, The Mayflower, Washington, D. C.

DISTINGUISHED EXAMPLES OF
HOTEL AND APARTMENT HOTEL
FURNISHINGS EXECUTED BY
THE PICK-BARTH STAFF OF
INTERIOR DECORATORS
AND HOTEL SPECIALISTS





Main Lounge in The Graemere, a Chicago Apartment Hotel



Lobby Lounge, The Graemere, Chicago, Ill.



Main Dining Room, The Graemere, Chicago, Ill.



Grill Room, The Park Central, New York



Main Dining Room, The Park Central, New York



American Colonial Room, The Park Central, New York



Ballroom, The Park Central, New York



Gothic Room, The Park Central, New York



Italian Room, The Park Central, New York



Arabian Room, The Park Central, New York



French Room, The Park Central, New York



The Striking Spanish Lounge of The Gaylord, Los Angeles, Cal.



Lounge and Afternoon Tea Room, The Gaylord, Los Angeles, Cal.



Lobby Lounge in The Warwick, Philadelphia, Pa.



A Corner of the Lobby in The Warwick, New York



Interesting Dining Room Treatment, The Warwick, New York



Colonial Dining Room, Hotel Ritz-Carlton, Boston, Mass.



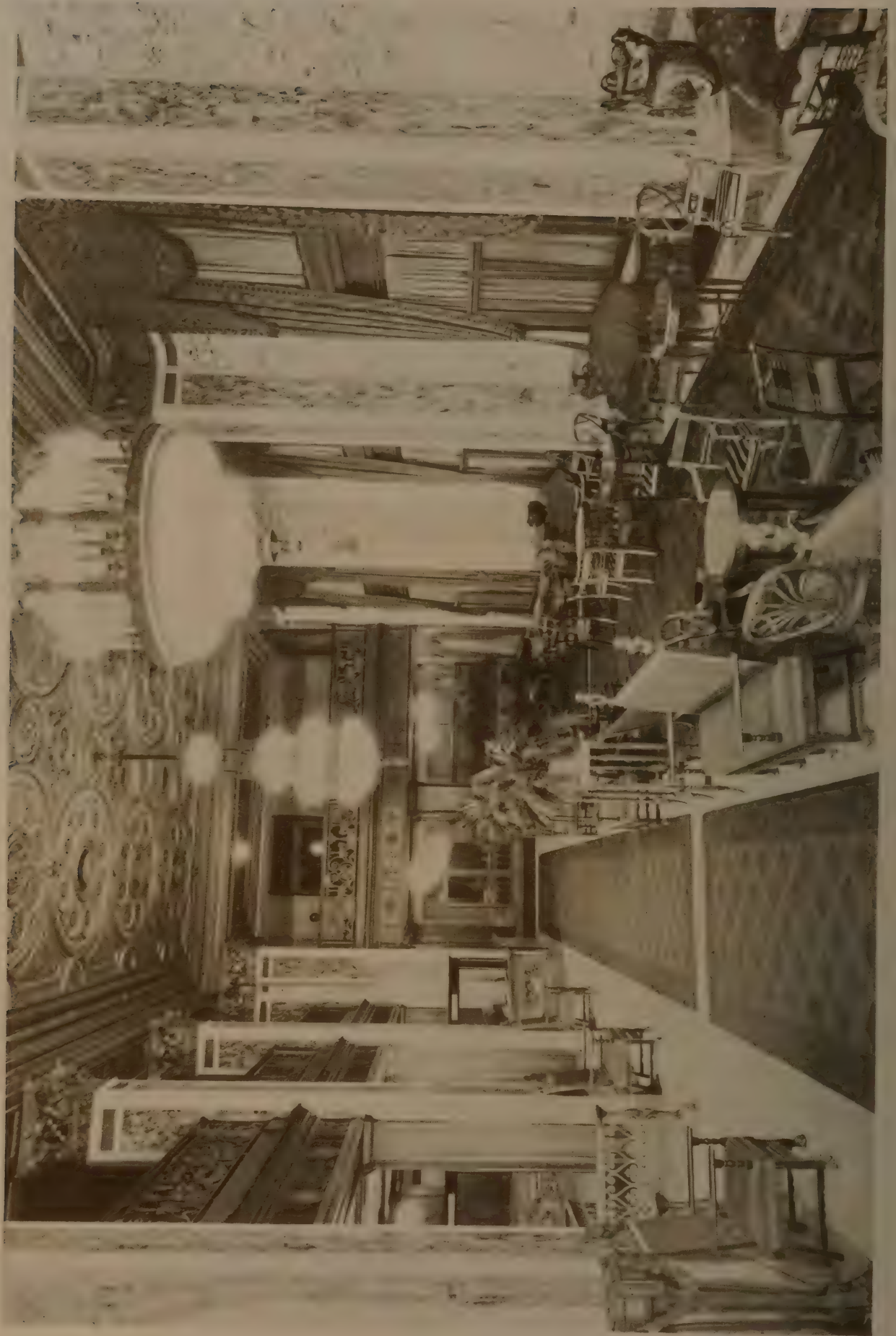
Main Dining Room, Hotel Ritz-Carlton, Boston, Mass.



Lounge, Hotel Granada, Brooklyn, N. Y.



Solarium, Hotel Granada, Brooklyn, N. Y.



Lobby, Hotel Book-Cadillac, Detroit, Mich.



Venetian Dining Room, Hotel Book-Cadillac, Detroit, Mich.



Italian Garden Ballroom, Hotel Book-Cadillac, Detroit, Mich.



Main Lounge, Hotel Half Moon, Coney Island, N. Y.



Dining Room, Hotel Half Moon, Coney Island, N. Y.



Main Dining Room, Hotel Half Moon, Coney Island, N. Y.



Sea View Dining Room, Hotel Half Moon, Coney Island, N. Y.



Library Lounge, Wade Park Manor, Cleveland, Ohio



A Special Suite Bedroom, Wade Park Manor, Cleveland, Ohio



Lobby Lounge, Park Lane Villa, Cleveland, Ohio



Main Dining Room, The Whitehall, Palm Beach, Fla.



Open Air Dining Room, The Whitehall, Palm Beach, Fla.



Palm Room, Hotel Roosevelt, New Orleans, La.



Main Dining Room, Hotel Roosevelt, New Orleans, La.



The Cleverly Designed Main Dining Room of the Hotel Bismarck, Chicago, Ill.



Lobby Executed with Pueblo Indian Decoration, Hotel Franciscan, Albuquerque, N. M.



Another View of the Interesting Lobby of the Hotel Franciscan, Albuquerque, N. M.



Lobby of The Belcrest, Detroit, Mich.



Lounge, The Belcrest, Detroit, Mich.



Mezzanine Lounge, Hotel Floridan, Tampa, Fla.



Dining Room, Ritz Towers, New York



Reception Room, Webster Hall, Pittsburgh, Pa.



Men's Lounge, Webster Hall, Detroit, Mich.



Dining Room, Webster Hall, Pittsburgh, Pa.



Main Lounge, Webster Hall, Detroit, Mich.



Lobby Lounge, Hotel King Cotton, Greensboro, N. C.



Early American Dining Room, Hotel King Cotton, Greensboro, N. C.



Ballroom, Hotel Schroeder, Milwaukee, Wis.



Ballroom Foyer, Hotel Schroeder, Milwaukee, Wis.



Two Views of Lobby Lounge, Hotel Schroeder, Milwaukee, Wis.



Main Dining Room



Lobby Lounge



Main Lobby, Hotel Schroeder, Milwaukee, Wis.



Painting from the PICK-BARTH Interior Decoration Studios

Lobby of the New Southern Hotel, Jackson, Tennessee

Chapter XIII

Furniture—As It Should Be Made for Hotel Purposes

In this chapter it is the intention to comment on Furniture from its economic side—that is, as a part of the hotel's investment, and not from the standpoint of beauty except so far as appearance cannot be divorced from practical considerations.

No doubt there are several other items entering into the cost of building and outfitting a hotel which run into as much money proportionately as the furniture. Among them all, though, you will not find one on which the possible variation in cost and in value is as large. The range in prices between grades of building materials and equipment and the resulting differences in length of service, and cost of maintenance are things which receive close attention from people who are expertly informed—architects, contractors, operators and so on, and if the selections are not soundly made it is seldom because a serious effort is lacking. Furniture, however, which is one of the greatest of all parts of the total investment, presents a larger price range and a far more serious consequent variation in performance, yet its selection by the average hotel is done in a manner which compared to that used in other important things is haphazard guess-work.

Furniture has the reputation of being hard to judge. It deserves its reputation. Gauging the value of the materials and construction involves quite a technical knowledge, a difficulty which is heightened by the fact that quality is hard and often impossible to see without tearing the furniture apart. It is not reasonable to expect a hotel operator to become an expert furniture judge overnight. Fully recognizing the truth of the old warning that "a little knowledge is a dangerous thing," he should, however, try to understand enough about furniture construction to form a definite appreciation of the things which determine its value under hotel operating conditions. Viewing furniture products as a class, let us take note of the principal things (other than style and artistic design) which establish its value in a hotel. Chiefly, they are as follows:

1. *Woods*—including the kinds used, where they are used, their seasoning and condition, the way they are sawed or prepared, etc.

2. *Construction and Wood Joining*—the type of general construction, the furniture joints used, the

bracing, the use of veneers and glued structure, the accuracy with which parts fit, etc.

3. *Finishes*—on both wood and metal—their durability, beauty, adaptability to hotel operation.

4. *Upholstery Construction*—including type of construction, materials and workmanship.

5. *Covering Materials*, fabrics, leather, etc.—not only their length of life but their satisfactory qualities for hotel service.

6. *Hardware*, exposed and concealed, considering both quality and methods of application.

7. *Special Hotel Design*, such as required in many important cases.

(Note: Metal furniture, to which the above does not apply, presents a parallel case.)

These factors have importance in varying degrees in Case Goods (Dressers, etc.), Upholstered Furniture, Chairs and Tables, Bed Springs and Mattresses, Reed Furniture, and other classes of products.

Furniture Woods and Their Values—Certain woods, such as mahogany and walnut, are well known as "aristocratic" kinds. It may be the general impression that these woods are desirable mainly because of their appearance. It should be understood that the preferred woods have won their place because of their practical qualities as well. It should also be known that the natural properties of woods may be offset to a certain degree by the skill and care used in the sawing and conditioning. In general the more expensive woods, because of their higher market value, might be more safely assumed to be properly conditioned than less valuable varieties.

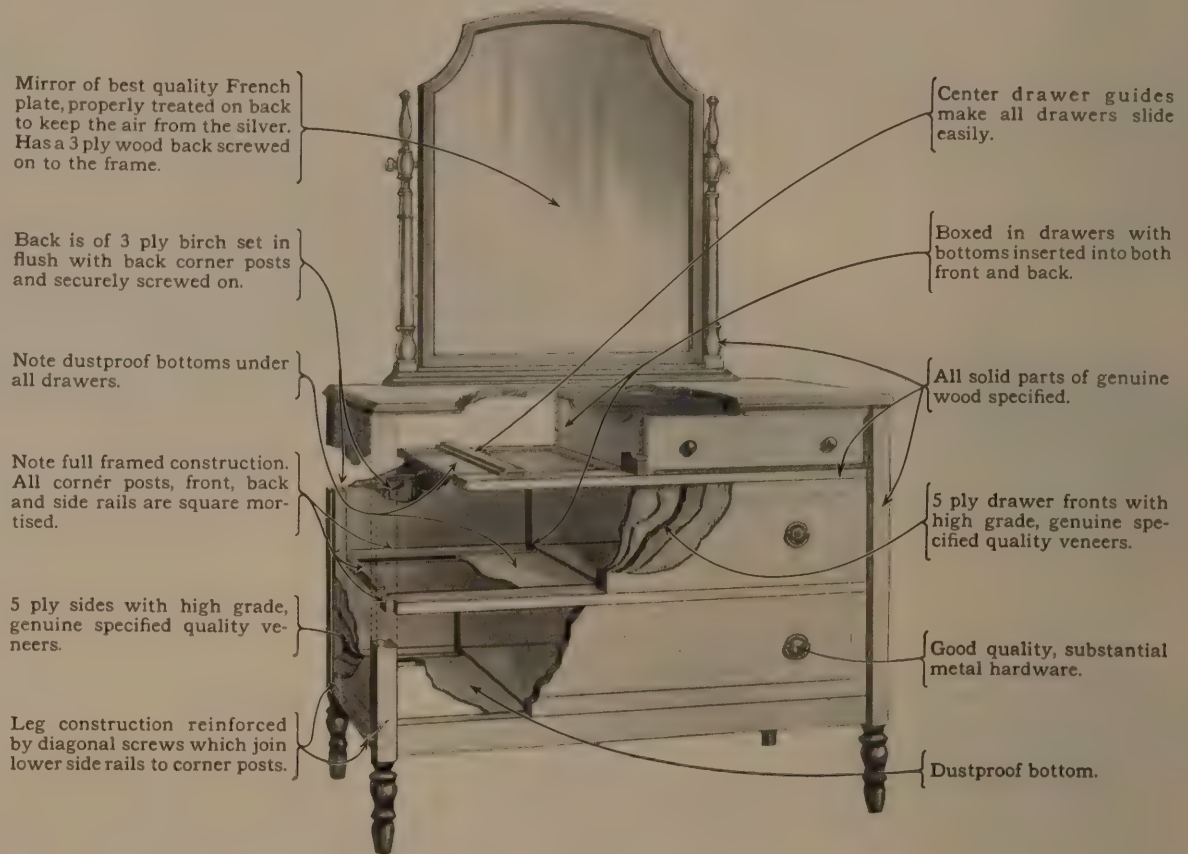
The valuable and well known woods used for exposed parts of furniture are the so-called Hardwoods, the principal ones being mahogany, walnut, maple, birch, oak, gum and beech. The less valuable woods are the soft woods and include pine, fir, spruce, cedar, poplar and similar kinds.

There are certain places where each of the woods may be used with satisfactory results. The substitution of one wood for another, however, has a decided effect upon the cost and value of the furniture, and where one of the highly preferred varieties is substituted for in part or entirely, that fact should be made absolutely clear by the seller, a thing which emphasizes



Distinctive Furniture in the Hotel Graemere, Chicago.

A Typical Specimen of Good Construction of Case Goods for Hotel Service



This photograph shows the dresser diagrammed above as it appears when finished. The dresser of inferior construction shown on the opposite page would have practically the same appearance.

THE Dresser shown here has what is termed a full framed-in construction, which means that it has a securely joined structure of upright and horizontal pieces on all four sides, resulting in rigidity of all parts, and with no weak points in the structure. Thus it does not depend upon the sides, back and top to provide the strength of the piece, although these parts are so carefully joined into it as to add materially to its ruggedness. The dresser is also fully provided with dustproof bottoms so that each section constitutes a dust-tight compartment. All drawers are provided with center guides which counteract the side play caused by pulling on one handle only, and make them slide evenly and easily. The drawers themselves are of boxed-in construction, the bottom being inserted into both the front and the back. At various points in the structure there are braces to reinforce the joints. All wood joining is by means of secure mortise and tenons, dowels, dovetails, etc., there being no resorting to weak butt end joining or similar processes. The veneered parts are all 5 ply and all exposed wood parts are of the genuine woods specified. The mirror is a real French plate glass one, properly treated, with 3-ply wood backing. Compare this with the cheaper construction shown in the diagram on the opposite page. These two dressers are nearly identical in superficial appearance, yet in point of construction costs alone, there would be a difference in price of about 15%. The shortsightedness of this saving, however, may be understood when we say that experience has shown that products of the better construction *will last twice as long* under hotel conditions.

And bear in mind that we have restricted the comparison to two dressers of practically identical appearance, and that a greater variation in construction could be shown if this point were waived.

the necessity of dealing with a thoroughly responsible concern. Substitute woods may be judiciously used without causing a serious lessening of strength. Where they are used, the piece should not be compared on an equal basis with furniture in which the genuine material appears.

Mahogany—the finest of the widely used woods, deserves its place both because of its beauty and its strength and permanence. It is what is known as a "diffuse porous" wood, the gradation between the summer and winter growth being slight and the marking or grain being softly modulated. The wood has a rich natural color and takes furniture finishes of great attractiveness. Large surfaces are usually "veneered" and the veneering is often matched which makes the figuring of the wood produce an interesting design especially if what is known as "crotch mahogany" is used. Mahogany has a fine and uniform texture and is tough and strong. Carving and shaping the wood is facilitated by the evenness of its structure, and the wood does not warp easily. Good mahogany comes from very old trees, the darkness of the wood increasing with age.

Walnut—by which is meant the American Black Walnut, comes closer to mahogany in value and

popularity than any of the other widely used woods. Its grain is somewhat more pronounced than mahogany, and the figuring of the wood from trunks of trees is somewhat less uniform in pattern. From the stumps of some walnut trees and from the "burls" (a peculiar large growth on some trees) veneer is cut which has a strong and beautiful figuring that may be made to repeat itself and form striking patterns due to the method of cutting. The wood is naturally dark, often a deep brown and the marking formed by the yearly growth rings is wide and softly blended. Walnut is a hard, strong wood, well adapted to carving. It is very permanent, having a minimum tendency to warp, swell or shrink. Like mahogany, walnut darkens with time. The wood takes a large variety of handsome finishes, some of which cleverly give the effect of antiquity.

American Walnut should not be confused with the well known Circassian Walnut, an imported wood of much different appearance, the main characteristic of which is the gnarled and contorted growth which produces a strongly marked pattern of figuring.

Birch—Although mainly used in furniture as a substitute for mahogany, walnut or other woods,

How the Dresser Shown on the Opposite Page May Be Cheapened Without Altering Its General Appearance—But with a Sacrifice of Durability

Mirror is regular run quality, not specially selected and often shows sand spots or bubbles. Back is usually a sheet of cardboard tacked to the frame.

Frame construction is very insecure. Side rails are only tacked into the back corner posts. There are no back rails to hold frame together.

Back, made of single ply wood and in many cases only of cardboard, is tacked to the back corner posts.

Sides are only 3 ply with veneers often not of the genuine wood specified.

Drawer bottoms are inserted into front only, and are merely tacked to bottom of the back, often insecurely.

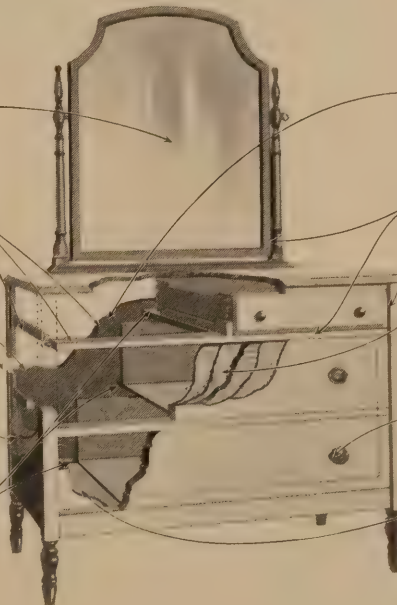
Note absence of center drawer guides and dustproof bottoms under drawers.

Solid parts are often of inferior quality wood finished in imitation of the wood used for veneers.

5 ply drawer fronts but sometimes with veneers not of the genuine wood specified.

Hardware is of a lighter weight, cheaper grade and often only wooden knobs are used.

This is the only dustproof bottom in dresser.

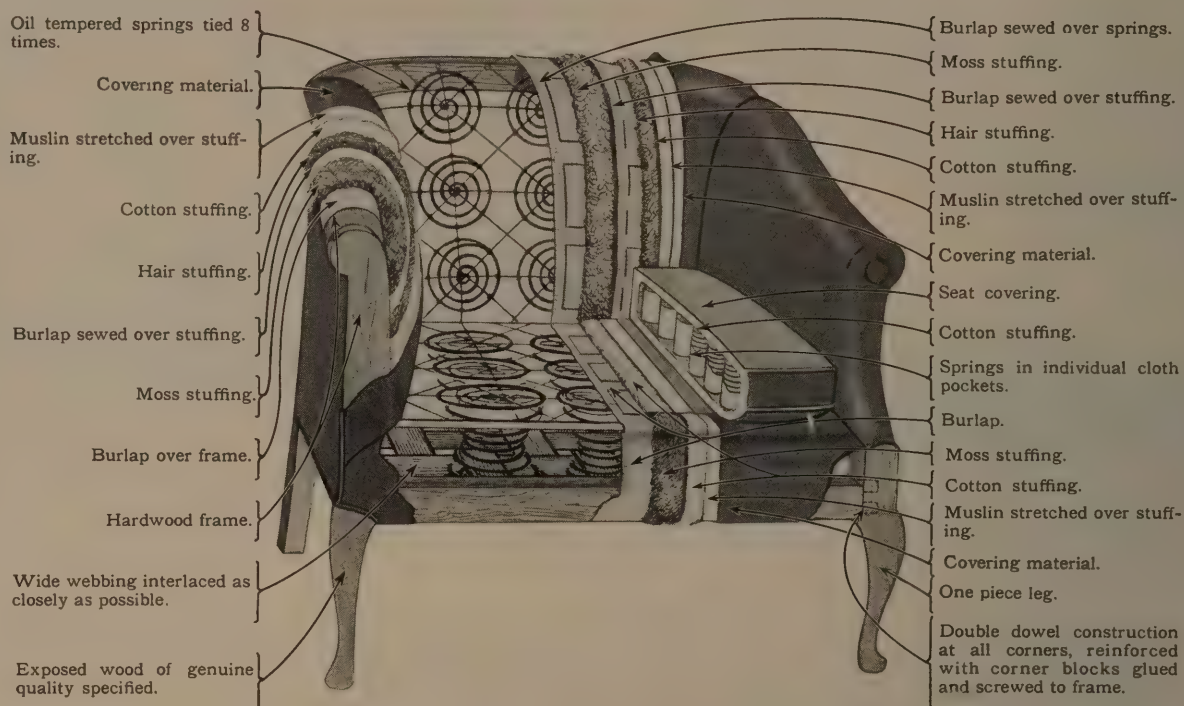


FROM an ordinary examination of the appearance of this dresser, the layman would be likely to think it the same as the one shown on the preceding page. The design is the same, and the general finish (of a new piece) would not be very noticeably different. Yet its construction tells a different story. The strong framed-in construction has been eliminated and for it is substituted one far less secure, with weaker side rails and no back rails at all. Thus what framework there is, is not only less secure, but is further endangered by the weak back. The dustproof feature between drawers is left out, as is the important center drawer guide, and the drawers themselves are of less substantial construction, with bottoms inserted at the front only. The furniture joints are of cheaper (and weaker) character, the side rails, for example, being merely tacked or nailed to the corner posts. The side veneers are 3-ply instead of 5-ply and the 3-ply dresser

back found in the better piece is omitted and a single ply wood or cardboard back substituted. The mirror is a cheaper quality backed by cardboard tacked to the frame. In addition to the structural changes many changes in material are possible such as the substitution of inferior lumber in the structural parts and the use of imitation woods on legs, tops and other exposed surfaces.

It should be understood that this comparison does not represent the extremes of construction by any means, there being better and poorer structural systems than those shown, as well as many intermediate qualities. The object has been to show two commonly used types of furniture and their relative costs and value. In these two dressers there is a difference of about 15% but because this 15% is taken out of the heart of the dresser's quality it results in a 50% reduction in its length of life.

An Example of Good Construction of Overstuffed Furniture for Hotel Use



THE large variation in the quality of overstuffed furniture is due to two things:—first that the nature of the construction permits a wide latitude, and second because the features of construction are hidden from sight in the finished piece. This kind of furniture involves the use of a large number of parts such as springs, webbing, stuffing, binding, etc., all of which

are combined in an intricate way by hand work, with the result that the skill of the workman and the time he is permitted to spend have a vital effect upon quality. The consequences of this variation in quality are great enough under ordinary private home conditions—in a hotel, where wear and tear are many times magnified, they present a genuinely serious problem.



This photograph shows the chair diagrammed above as it appears when finished. The cheaper quality chair described on the opposite page would present virtually the same identical appearance.

THE structural diagram on this page shows a good standard type of upholstery construction for hotel purposes. The frame is built of hardwood, preferably birch or ash, with all double dowel construction on corners, and reinforced with glued and screwed corner blocks. The back sides of arms and bottom are of heavy webbing interlaced as closely as possible. This webbing is the strongest and best that can be procured and is carefully tacked to the frame and then the edge is turned over and re-tacked with a special double tack, making a strong secure foundation. On this webbing foundation are sewed fine oil tempered springs, which are tied at the top with strong twine, the rim of each spring being bound by knots in eight places. The springs are then covered with good grade burlap (sewed to the springs). Over this are placed a layer of 3X or 4X moss stuffing covered by burlap which is stitched clear through the stuffing to hold it in place. Over this is a layer of hair stuffing with a layer of good cotton felt, on top of which a covering of muslin is snugly fastened. The upholstery fabric when finally applied is put on over this muslin covering. The seat cushion is filled with springs each in an individual cloth pocket, covered with good cotton felt. The many layers of stuffing separated by muslin or burlap hold the padding in place and eliminate the likelihood of bunching, forming lumps or getting out of shape, as well as making the furniture more comfortable. The strong and careful fastening of each part makes it long lived. Compare this well made piece of furniture with the one illustrated on the opposite page. Note the differences in the framework, the foundation, the springs, padding and workmanship. There is a vast difference, yet, given the same covering materials there would be practically no visible difference in the appearance of the two products. The cheaper chair would probably be priced 25% lower (exclusive of the covering material) but the better constructed chair may be relied upon to last from two to three times as long.

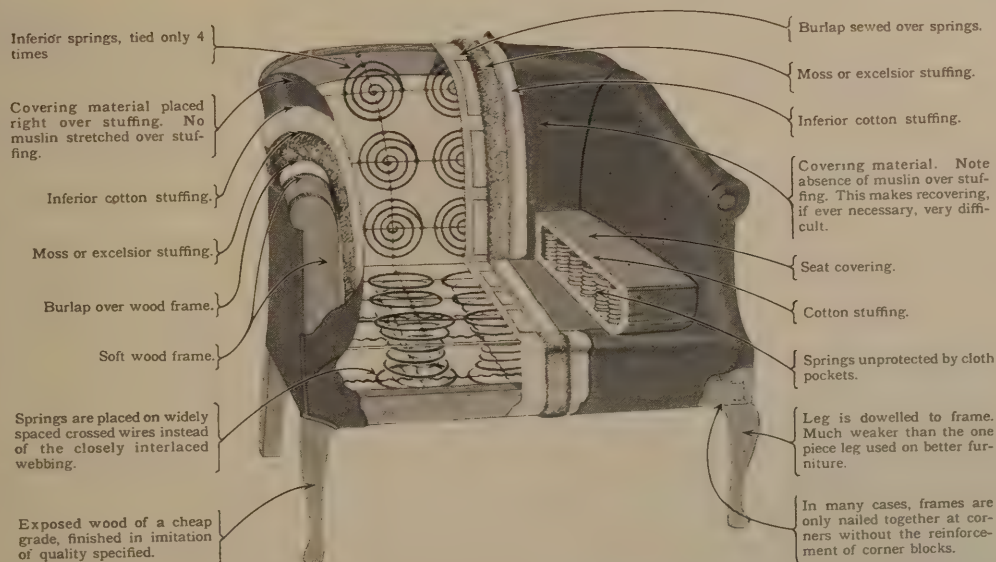
birch has good qualities of its own in a practical way. It is a fairly hard and strong wood, tough and quite satisfactory to work. The graining of the wood is soft and pleasing. The wood takes staining and finishing beautifully. Red Birch may be treated to imitate mahogany so cleverly as to make it hard to tell the real from the substitute. "Unselected" Birch may be similarly finished to imitate walnut. Much good furniture is made with birch as a substitute wood and there is nothing discreditable about the practice unless the facts are concealed. While birch is a good wood, it does not claim to be the equal of walnut or mahogany and its cost is less. Much painted furniture is made of birch, and it is also frequently used in its natural color with pleasing results. Curly Birch has attractive figuring and is valuable for veneer panels.

Gumwood or Red Gum, like birch, is widely used to imitate other woods. The wood is reddish in

color, with a smooth fine grain and takes finishes excellently. While sometimes substituted for mahogany, it is chiefly treated to imitate walnut, and many pieces are made with genuine walnut veneer and gumwood legs, posts and other exposed solid parts. Gumwood as a substitute for walnut is about as hard to detect as the birch imitation of mahogany. Its use should always be clearly known to the buyer or price comparisons are manifestly unfair—which does not mean, however, that the wood is not desirable, for with good construction a satisfactory piece of furniture may be produced.

Oak is a wood of strength and toughness with quite pronounced marking of grain and a coarse texture. Not being satisfactory for delicate carving or shaping it is used most in furniture of simple and often massive design. Its characteristic roughness of surface is not conducive to a highly polished finish but the many dull oak finishes are

How the Chair Shown on the Preceding Page May Be Cheapened Without Changing Its Appearance—and Effect of This Cheapening on Its Length of Life



FROM an inspection of the finished product, the chair illustrated here (given the same covering fabric) would appear to be almost identically the same as the one shown on the preceding page. Yet when you can look under the surface what a different story is told! The frame is made of less desirable wood, perhaps nailed instead of doweled together, and without the bracing of corner blocks. Cheaper springs are mounted on a widely spaced wire foundation and are tied four instead of eight times. One layer of moss stuffing (sometimes excelsior) and one layer of cheaper cotton felt are used, the hair stuffing layer being omitted, and there is no muslin or burlap cover to hold this stuffing in place, the final upholstery cover performing this work alone. The cushion springs are unprotected by cloth pockets, being merely covered with muslin, then cotton felt.

This chair is not the equal to the better quality in either comfort or wearing qualities. In a comparatively short time under the severe use it would be given in a hotel, its stuffing would become uneven and out of shape, its springs would get out of place and wear against the stuffing, and its framework and fastenings would become insecure. It is cheaper,—yes, yet the loss in life is over ten times the saving in cost.

Bear in mind that this comparison is not to be considered as a contrast of extremes, but is limited to one where the pieces when finished presented practically the same appearance. Covering materials have not been included in the discussion at all, but if they had been included it would be possible to show a parallel difference.

Other Methods of Upholstered Furniture Construction

THERE are various other types of upholstery construction which may be used, some of which are desirable and some of which are not.

One type is called "automobile construction" and affects only the springs and their foundation. This method makes use of a steel foundation somewhat like a bed spring, the result being perhaps a little less luxurious, although very desirable from the standpoint of strength. It is a good practical construction for hotel purposes and is somewhat less costly than the method shown on the opposite page.

Another well known type makes use of the webbing founda-

tion on top of which is placed a set of springs cased in muslin, the stuffing then being applied. This is a method which produces wonderfully soft and luxurious furniture and is much used for private homes on this account. For hotel use, however, it is not considered practical, as it is not sufficiently durable to withstand the wear and tear to which it will be subjected.

In very high grade upholstered furniture, the spring center seat cushions are replaced by down-filled cushions. This is a concession to luxury, however, and should be used with that understanding.

very pleasing. The best furniture has its flat surfaces made of quarter-sawed oak. This process means the sawing of boards from the log in such a manner as to make the saw cut in each instance practically parallel to the radius of the log. While this causes some waste in cutting, and a resulting increase in cost, it greatly adds to the beauty of the grain markings in the wood. Because of its strength and permanence, oak is much used for the framework of furniture having exposed parts of walnut, mahogany and other woods.

Maple (Hard Maple) is very fine grained, hard and of a clean white color, and is a very highly considered furniture wood for many purposes. The rare "birdseye" maple is very valuable and forms beautiful veneers. Most good kitchen cabinets have workboards and similar parts of maple, because of the light natural color of the wood and its low absorption of water. Maple must be very well seasoned; it has a tendency to warp and split which is its chief drawback.

Soft Woods such as pine, spruce, fir, poplar, etc., are not to be considered in a class with hardwoods in furniture construction. They not only lack the sheer strength of hardwoods, but are far more given to warping, splitting, swelling and cracking. Such defects are fatal to furniture, where one of the prime requisites is permanence of dimension and shape. There are certain places where soft woods find good use, but they should only be countenanced when backed by the approval of a highly experienced and responsible furnishing expert.

Conditioning of Woods. Regardless of the kind of wood used, the preparation of the lumber is of vital importance. The principal points in this preparation are the cutting and selection and the drying.

The cutting and selection of lumber are important because certain logs and certain portions of logs yield wood which either in coloring, graining or strength are not of the best quality. The angle of the saw cut through the log determines the grain markings—as illustrated by the vast difference in appearance between plain and quarter-sawed oak. In veneers, the selection of the logs or parts to be used makes an equally great difference not only as between the plain and the burl, crotch or curly grains but among veneers of either kind.

The drying process is more complicated than might appear to the novice. The problem is not merely to dry the wood—it is to dry the wood in such a way as to bring it to a state where its dimensions and shape are permanent and which leaves it free from cracks, warping, splitting or other structural defects. If a log in its natural moist state is put in a room filled with hot dry air, it dries quickly on the *outside* forming a hard shell around a still moist center, (a condition called *case-hardening*), and splitting and warping usually also occur. When the center of a case-hardened piece of wood finally dries, its shrinkage either causes further general splitting or warping or makes a hollow split in the center of the wood, called "hollow horning." To avoid such defects, the drying processes must be carried out under carefully governed conditions, and means that the drying must be so gradual that the outside of the

wood will absorb moisture from the inner part as fast as the circulating air dries the moisture away. It also makes it imperative that the drying should progress at the same speed on all parts of the wood. If carried out the way it should be, the conditioning is not a cheap process. Obviously, the danger that it may have been slighted is greater on cheaper grades of lumber than on furniture woods, but there is plenty of furniture which with time develops defects of a kind that may be definitely attributed to careless preparation.

Wood Veneers, Joining and Construction. There are really two kinds of wood joining entering into the making of furniture—first the making of veneers, laminated parts, etc., and second the actual structure of the furniture itself.

Veneers. The large flat exposed surfaces of furniture, such as tops, sides, panels, drawer fronts and the like, are almost always made of veneered wood, or "built-up stock." To many buyers, the word "veneer" seems to imply some inferiority in quality—the term "solid mahogany" sounds better to them than "mahogany veneer." This impression is wrong. In the first place, as to strength and permanence veneers are more to be relied upon than solid slab of wood for a reason that can easily be explained: Built-up stock, or veneered wood, is composed of thin layers of wood, the grain of each layer being at right angles to that below or above it. Inasmuch as wood warps parallel to the grain, each layer counteracts any warping tendency of the other layers. For its weight, plywood thus formed is the strongest wood structure possible and is therefore used under conditions of the utmost severity, as in boats and aeroplanes. A good deal of the quality of the built-up stock depends of course upon the glueing. It may be understood, however, that two pieces of wood properly glued together are as strong at the joint as in the wood itself. (Thick solid parts of furniture are often made of two or more pieces of wood glued together, which again, if properly done, is no indication of weakened strength.)

The second advantage of built-up stock is that by the use of veneer many beautiful graining and figuring effects may be produced which would be impossible with solid pieces—as for example burl walnut, crotch mahogany and similar effects.

Furniture Construction. The construction of furniture varies so widely that to make any general discussion is hard indeed. Yet the permanence of the products and their dependability are so very much dependent upon this element, hidden from sight though it may be, that the attention of the hotel operator should be focused upon it even more than on the beauty and design. Features of construction which may appear trivial to the inexperienced man may cause startling differences in the furniture's length of life.

In general it may be said that the main factors in furniture building are (1) structural design, (2) materials, (3) type and quality of joints, and (4) workmanship.

The ideal construction makes a product which is strong, rigid, able to withstand the strain of weight, pushing, pulling or racking, permanent in its shape and dimensions and with doors, drawers, or other

Upholstery Materials Commonly Used for Hotel Furniture

THERE is much confusion among buyers as to the meaning of the various terms used for upholstery materials, and few realize what a wide variety of qualities may be designated by the same name. The following brief explanation will help clear up some of these points.

MOHAIR

Genuine Mohair is one of the finest and most durable of all upholstery fabrics. It is made of Angora Goat Hair on a cotton back and is what is known as a pile fabric. It is used in places which demand extreme durability such as in automobiles and railroad cars. There are different grades of genuine mohair, varying as to the thickness and length of pile. There are also different methods used in weaving the base. Designs are applied by various processes such as embossing, brocading and block printing, and sometimes wool and silk are introduced to secure certain color effects. This material is wonderful not only for its wearing ability, but has the remarkable quality of shedding dirt and retaining its fresh appearance.

Half Wool and Half Angora Mohair is an imitation of the genuine, costing less and appearing less glossy, while being less efficient in shedding dirt. It is, however, quite durable. *Wool Mohair* is still a cheaper grade containing only wool and cotton, with no Angora Goat Hair. It is much inferior to the genuine and is not recommended for hotel use.

VELVETS

In ordinary furniture the velvet used is *Cotton Velvet*. It is soft and shows the effect of pressure immediately, also showing a change in color upon being brushed. It is not durable and does not retain its appearance well and therefore is not recommended for hotel use on the seats and backs of furniture, although it is frequently used on the outside of arms and the outside back in order to reduce cost.

Silk Velour is seldom used for hotels, except on very expensive pieces where its particular rich appearance is desired, such as in small reception rooms.

TAPESTRIES

These fabrics are made on a Jacquard loom, and are quite different from pile fabrics. They are woven in patterns with color effects and there are many grades. Those made from hard twisted and finely combed yarns, when woven close are not only durable, but desirable for hotel work of a good standard quality. They are made to represent the much more expensive materials, such as Velvets, Mohairs, and Brocades. There is a large variety of finely woven cotton tapestries today, mostly in medium sized designs, which are sunfast, and many are washable. These are very desirable for hotel bedrooms, writing rooms, etc., for both furniture and draperies, and also for Willow furniture for cushions. They are not expensive, but are unusually serviceable. *Wool Tapestry* is the finest grade and with it many very striking effects in rather bold design are possible. Good wool tapestries have excellent durability.

NEEDLEPOINT

This is a woven type fabric, the pattern of which is produced by handwork with threads of wool or silk used to form the design. The threads are generally parallel, although some variations employ a type of cross stitch. Needlepoint is desirable for appearance, but due to the presence of a comparatively large amount of loose thread on the exposed surface, it is not as durable as a fabric should be for general hotel use, and as a result it should be employed for striking occasional pieces which are not expected to receive extreme wear.

Gros Point is needlepoint tapestry in which the stitches forming the design are large and the thread thick and when closely woven, is very desirable.

Petit Point is needlepoint with much smaller thread and stitches.

Imitation Needlepoint may be produced by machine processes, these fabrics being in reality tapestries. These are not to be confused with the true needlepoint which is to a degree handwork.

DAMASKS

Damask is a woven fabric of light weight, smoothness and lustre, generally being used on furniture of a rather delicate type.

Silk Damask is the really fine quality, giving a rich lustrous appearance well suited for fine furniture used in high class guest rooms, parlors, ladies' rooms and the like, but not so much for heavily used public rooms. Its wearing qualities are not of the very best and it is somewhat more easily soiled than is desirable, so it is used largely for its beauty rather than its practicality.

Cotton Damask usually contains some mixture of linen to give the lustre necessary to make it appear anything like silk. Many grades are possible and various weights. This fabric wears somewhat better than silk damask, but is inferior in appearance. The many grades which are made in the sunfast qualities are extremely desirable for hotel bedrooms for furniture and draperies.

BROCADES

Brocades are in much the same class as silk damasks, but they are heavier and more durable. They may, therefore, be used on chairs in public rooms to a greater extent, and because of their heavier texture and large designs do not need to be confined entirely to small pieces.

CRETONNES

Cotton Cretonne may be had in a wide range of qualities, both as to the fabric and the design application. It is more used for slip covers than actual upholstery. Its use as an upholstery material is practically limited to boudoir chairs, sun parlor and porch furniture and the like. Cheap grades are impractical for either, and even the best of cotton cretonne is questionable as to value for hotel furniture use except in bedrooms. Colors are often subject to fading both from washing and as a result of time.

Linen Cretonne is of a better quality for wear and for retaining its appearance.

FRIEZE

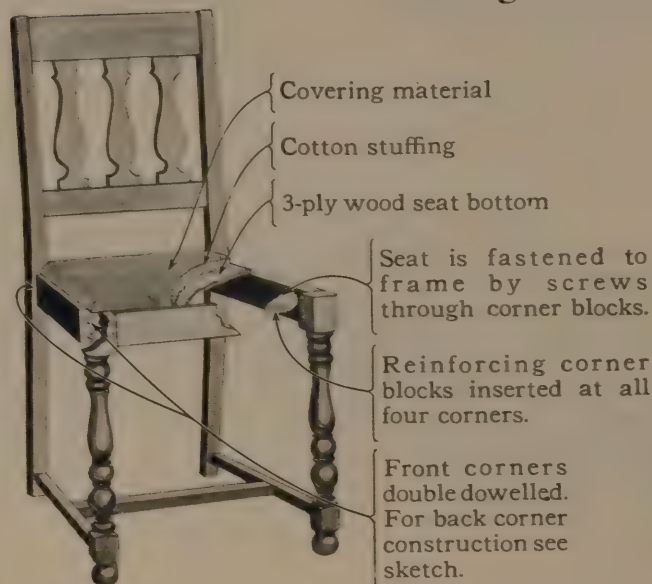
Frieze is a fabric like mohair except that it has an uncut pile. It may be had in the same colors as mohair and often is used in combination with mohair. Frieze is splendidly durable and is much used in hotel furniture, in fact, there is nothing that gives better service. *Linen Frieze* is made in striking colors and designs and wears exceedingly well. It does not, however, retain its appearance under hard use as well as ordinary frieze and although steaming restores its appearance, this drawback makes it less desirable for hotel use.

LEATHER

Leather is practically never used in its full thickness for furniture covering. The hide (usually steer's hide) is split into about five thicknesses, the three inside splits of which may be used on furniture. The second split from the outer surface is most valuable. The split leather is treated by various processes and is given an artificial grain which may be any one of many types. Qualities vary according to the value of the leather and the processes employed. Leather is a satisfactory covering for hotel furniture from all standpoints, especially in rooms where a masculine atmosphere is sought.

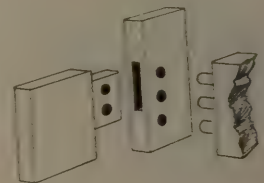
Imitation Leather is made on a fabric base, treated with a composition to give the leather-like surface, and then artificially grained. The best grades, made on a heavy fabric base, wear pretty well although they have neither the durability nor appearance of real leather, and the composition surface is rather easily scarred or punctured. Inferior grades, with a light fabric for a base and a less durable surface composition, are not durable or desirable.

An Example of Good Construction in a Hotel Dining Room Chair



HERE is a typical instance of the necessity for specially sturdy construction demanded in a hotel as compared with a private home. Dining room chairs in a hotel are used three to five or six times as often as those in private homes, and are used far more carelessly and roughly besides. Insecure joints, weak structure and absence of bracing soon show up under such severe treatment. In the chair illustrated here, the vital points are greatly strengthened and braced to withstand the punishment—a construction that costs more but saves many times the extra expense.

The sketch at right is a particular feature—notice how the horizontal parts when fitted together interlock in a joint of the greatest possible security.



movable parts which will work freely and smoothly.

How important a part structural design plays in meeting these requirements can be clearly seen by a little study of the two comparative diagrams on pages 280 and 281. One of these views shows a dresser of approved hotel construction, and the other illustrates how one of a very similar outward appearance may be produced with a lower cost, at the expense of strength and permanence. Just one item in this comparison serves to illustrate the matter of structural design—in the better dresser the framework is composed of strong and well joined horizontal and vertical members on *front, sides and back*, which combine to brace the dresser against strain and racking from all directions, so that it would retain its shape even if stood on one corner. In the cheaper dresser, the structural design calls for a less securely joined framework on *sides and front only*, leaving the back as a weak point in the structure, which upon occasions of strain throws undue load upon the other parts with the inevitable result that joints will become loose and other defects develop in a much shorter time. To the casual observer, this variation in structural design might appear trivial, if indeed it came to notice at all. Its bearing upon the furniture's length of service is anything but trivial.

One cannot discuss furniture structure without mentioning the choice of kinds and grades of wood. Concealed wood structural parts do not need the appearance of the high grade furniture woods but they do need strength and permanence. Thus very good furniture may have framework pieces of oak and similar sturdy woods of less desirable graining. You will *not*, however, find high grade furniture with framework of soft wood and the use of such materials should always be sanctioned by a hotel furnishing expert. The choice of woods also

involves the grade of lumber, there being a material difference in value between strictly first grade lumber and the lower grades containing knots or other defects. It might also be mentioned that certain conditions call for the application of unusual woods, a thing which only the expert is competent to dictate—a case in point being the use of special woods to counteract the effects of an unusual climate.

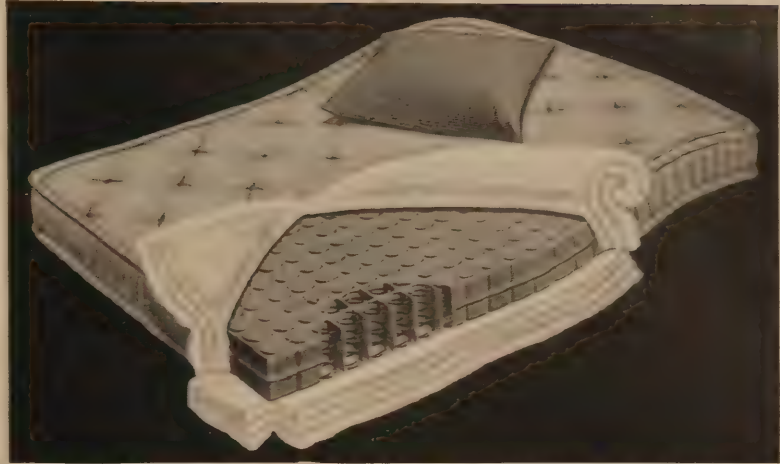
Furniture Joints. The character of furniture joints and the skill entering into their workmanship can literally make or break furniture. There are several types of furniture joints for practically every purpose. The best joints entail mortises, tenons, dowels, grooves, dovetails or other carefully fitted parts which take time to execute.

In cheapened furniture, one of the first things slighted, therefore, is the joining. A single dowel is substituted for two; dowels are eliminated and nailing substituted. Mortised-and-tenoned, tongued-and-grooved and other joints may be similarly cheapened. This is expensive economy. Everyone has had experience with chairs which have become "wobbly," and knows how surely this condition causes complete breakdown. The wobbly chair is the result of loosened joints—usually of a poor type. A chair with properly made interlocking joints of the kind illustrated on this page naturally costs more than one of ordinary dowelled construction, but that additional cost adds many times as much to the value of the chair.

In many places even the very best of joints require reinforcement by braces. Thus in dining room chairs, for example, the places where legs and seat join should be strengthened with wood or metal corner braces—a thing which is especially important when the legs have no cross members lower down. Bracing of this kind is another of the things frequently omitted in cheaper furniture.

This matter of structural design, wood joinings, etc., is pretty technical. It cannot be your expectation to master its intricacies in a short time. It is well, however, for you to form an appreciation of the great importance of this phase of furniture value so that you may protect yourself from the common error of buying by superficial appearance and price. If you are confronted with two products of similar appearance but widely differing prices, remember that there must be a reason for the difference and that in the majority of cases, that reason will be found in the construction. And remember, too, that 10 or 15% saved by cheapened construction may mean 50% or more loss in length of service. The most dangerous thing to cheapen in furniture is its construction. If a saving must be made, let it be made judiciously by the aid of an experienced hotel furnisher.

Wood Finishes. From the hotel's standpoint the main consideration here is low upkeep. Any finish which requires constant attention or which is easily harmed is undesirable. Thus, while dull rubbed finishes are very beautiful and may be used for fine occasional pieces they are less satisfactory for general use than glossy finishes. Painted furniture is desired by many, but if it is used, it should receive particular attention as to quality of finish, as it must be wiped off frequently and is easily marred. Cheap varnishes are especially bad where the furniture is likely to come in contact with water. For all around desirability a good lacquer finish is recommended, as it will retain its appearance for a very long time with minimum attention, and in spite of hard knocks, and the action of water, alcohol, etc.



A Spring Center Mattress of the type that is gaining wide popularity for hotel use.

Upholstery Construction. What is beneath the covering of a piece of upholstered furniture is a mystery to the average man, and as a result, the variation in the quality of construction of such furniture is immense. No hotel furniture receives worse wear and abuse than the upholstered pieces. Indeed, the hotel man may assume there is no upholstered product made that is well enough built to last indefinitely. Even with the best construction that money can buy its days of usefulness are measured. Then too, it is particularly true of this class of furniture that the ordinary types of construction designed for private home use are highly impractical.

The building of upholstered products is not a machine process like wood turning, etc. The work is largely hand work involving the assembly of many parts such as springs, webbing, stuffing, interlinings, etc. Consequently the finished product reflects to a large degree not only the skill of the workman, but the time he is permitted to spend on his task.

A general understanding of upholstering processes and their relative value can be better gained by concrete instances than by general conversation, and for this we refer you to the two comparative diagrams given upon pages 282-283.

Upholstery Fabrics. We have said that no upholstery construction is too good. This is even more true of upholstery fabrics. And in fabrics, wear and tear is only one of the causes of deterioration, for soiling, fading, cost of cleaning, deterioration due to cleaning processes and similar things are important too. The temptation in buying fabrics is to choose by appearance and price. Both are liable to prove poor guides and this works both ways. There are endless varieties of fabrics both cheap and expensive which are totally unfit for hotel service and many whose use is limited. The value of the specialized hotel furnisher lies in his abil-



A Box Spring of good approved type of construction for hotel use.

ity to secure attractive results by the use of *only* such materials as are known by him to be practical. A particular caution is issued in connection with the use of such general terms as "Tapestry," "Mohair," "Damask," etc. Each of these terms includes a large variety of qualities and unless you understand clearly just what grade is meant, you are buying in the dark. A brief general explanation of the most important grades is given elsewhere in this chapter. (See page 285.)

Furniture Hardware. Exposed hardware of furniture presents considerable variation in quality as well as design and to a certain degree the difference may be detected by examination. That these differences should be looked for goes without saying.

The less obvious hidden hardware fittings are less appreciated, but have a greater practical importance. Some hardware parts such as hinges and catches are necessities. Many other fittings such as metal corner braces are substitutes for wood parts, and still others are entirely additional features. There are many places, especially in hotel beds, chairs, tables and case goods, where the use of metal structural parts materially improves construction. Casters are more important from an operating standpoint than their cost might indicate, and this is one of the many small matters where expert guidance will prove of value quite out of proportion to the money involved.

Special Hotel Design. There are numerous pieces of furniture used in hotels which because of the service they are to perform, or the conditions under which they operate must be of entirely specialized design (i. e. hotel desks, waiter stands, combination dressers and desks, etc.). These features are the result of practical experience and the use of ordinary types in their place is frequently bad economy of investment, or results in poorer service or operation.

There are various classes of products included under the general term Furniture to which the above discussion applies only in part. Among these, the group embracing Bed springs, Mattresses, etc., deserves special mention.

Springs, Mattresses and Pillows. There are three types,—fabric, coil and box springs.

Fabric Springs are not generally suitable for hotel purposes, as they are not comfortable to sleep on. Their only use should be for emergency cots and the like. There are several styles available, the best being formed of interlaced steel ribbons.

Coil Springs may and may not be satisfactory as to comfort, depending upon their design. Double coil springs naturally are much softer than those with single coils but the latter are less expensive. There is quite some variation in quality among coil springs, and these differences influence comfort, noiselessness and length of life.

Box Springs are the best of all for comfort, appearance and noiselessness, and if well made are the equal of any in length of service. Box springs resemble upholstered furniture, though, in that there is a wide difference in quality possible, and also like upholstered furniture, box springs have need of the very most substantial construction. The main variable features of quality are the wood framework, the quality of the springs and the way they are assembled, the quality and application of padding,

the covering materials, the structural design and all around workmanship. The coil spring construction shown on page 287 is a good standard type.

Mattresses. Cotton Felt, Hair and Inner Spring mattresses are the three types generally used in hotels (excelsior and similar very cheap grades being manifestly unsuitable).

Cotton Felt Mattresses are the least expensive but are less comfortable and durable too. With time they pack down and become lumpy. They vary in price according to their weight, the quality of the filler, their covering material and workmanship. In spite of their low initial cost, therefore, they are a relatively poor investment. (An expensive quality made of White Staple Cotton is omitted from consideration as its high cost has discouraged hotel use.)

Hair Mattresses are very fine and many high class hotels prefer them above any other kind. They are soft and restful and retain that quality for a very long time indeed, making them desirable both as an investment and as a pleasing accommodation for guests. It is a common mistake to assume that all hair mattresses are alike. Actually this is far from true, a good deal of variation being caused by the weight and quality of the hair used, and also by workmanship and covering material.

Inner Spring Mattresses are a comparatively recent development that is infinitely better than cotton felt, and contests with hair mattresses for all around desirability. These mattresses, as shown on page 287, have a center formed of numerous soft coil springs, usually upholstered with cotton felt padding. This construction is wonderfully comfortable and many consider it superior to hair in this respect. If well made it has great durability too. Due to these qualities, and to the fact that they cost somewhat less than hair mattresses, the inner spring mattress is rapidly increasing in popularity.

Pillows are graded mainly according to their stuffing. The best are of goose feathers. Duck, turkey and hen feathers are next, ranking in that order as to desirability. Different kinds are often mixed, and thus we find pillows of 75% duck and 25% goose feathers, others of a duck and turkey combination and so on. The quality of the cover is important both from the standpoint of wear and for being feather-proof.

It is easy to economize on bedding, but this is not wise economy especially since the result will be directly felt by every guest in a loss of comfort.

To go into a comprehensive discussion of all of the different kinds of furniture, while interesting, would be too lengthy a proceeding to attempt here. We have however included a rather detailed analysis of comparative methods of construction of two important classes of products—Case Goods as represented by a Hotel Dresser (see pages 280-281) and Upholstered Furniture (see pages 282-283). This specific material, together with the general outline of the main factors which influence quality and durability taken together will help to form an appreciation of the practical importance of furniture construction. With this viewpoint, and aided by experienced hotel furnishing specialists such as found in the PICK-BARTH service staff, you will be in the best possible position to make wise investment of your money.

Chapter XIV

The Hotel's Carpet Problem

Grades and varieties of carpet fabrics are almost always hazy in the ordinary buyer's mind both because terms are rather flexible and because manufacturers' trade names help to confuse the issue. Before entering into any discussion of the hotel's floor covering problem, therefore, it is best to start with a brief description of the principal grades.

All carpets and rugs which are used by hotels to any extent are "pile-woven." The material of which the nap or surface is made may be either *worsted* or *woolen*. Worsted is a yarn made of long fibre wool, selected and combed out. Woolen yarns may or may not be carefully prepared and selected, and contain shorter wool. The base or back of the rug may be linen, linen and cotton or, in cheaper grades partly of jute.

The different varieties of carpets are classified mainly by the methods of weaving and also according to whether the pile is cut or uncut. *These classifications however do not define the quality of the fabrics.* In each kind of weave there is a wide range of qualities governed by the grade of yarn used, its preparation, the closeness of the weave, the depth of the pile, the quality of the back and other similar factors. Therefore, to make a comparison between two whole classes of carpets is more complicated than would first appear to be the case and this accounts for much of the misinformation which exists in the minds of carpet users both large and small.

There are really only four main types of carpets in general hotel use. These are the following:

1. Wiltons.

Wilton carpets and rugs are made on what is known as a Jacquard loom, which produces the pattern by weaving together yarns which have been dyed

beforehand. The pile is deep and has a beautiful sheen and the designs and colorings which are available are very rich. Wilton carpets and rugs have been used for both domestic and public purposes for many years and have proven very durable. They are generally considered among the highest priced of all domestic varieties, but actually are made in many qualities. The pile may be made of either worsted or woolen yarns of various qualities and may be woven on a back of linen, linen and cotton or linen, cotton and jute. There is quite a wide range in the closeness of the weave and the consequent number of tufts to the square inch and also in the depth of the pile.

Body Brussels carpets and rugs are manufactured by the same process as Wiltons but have an uncut pile and are not so closely woven. They are extremely durable but lack softness and rich appearance and are not recommended for hotel purposes.

2. Velvets.

Velvet carpets and rugs (also sometimes called Wilton Velvet) are woven on a velvet loom and are colored after weaving. The pile may be either worsted or woolen, and as with Wiltons, may be of different degrees of closeness, depth and quality of yarn. Velvet carpets are extremely durable and they have an attractive appearance. They are very popular in solid colors and are gaining fast in preference in figured fabrics. For hotel use, Velvets are highly desirable as they present a combination of durability, appearance and moderate price. The variety of designs available in stock merchandise is not as large as in Wiltons, but if sufficient time is given, almost any desired effects can be produced as the number of colors which are possible is almost unlimited.



An Imported Hand Tufted Rug in the Lobby of The Gaylord, Los Angeles

Examples of Floor Covering Treatment in Public Rooms



Main Lounging Room, Webster Hall, Detroit



Lobby, North Park Hotel, Chicago



Lounge, Hotel Graymont, Chicago



Parlor, Hotel Roosevelt, New Orleans



Dining Room, Hotel Roosevelt, New Orleans



Foyer, Country Club Apartments, Chicago



Elevator Lobby, The Mayflower, Washington, D. C.



Lobby, Webster Hall,
Pittsburgh, Pa.



Foyer, Wade Park Manor,
Cleveland, O.



Lounge, Hotel Abraham Lincoln,
Springfield, Ill.

Tapestry Brussels carpets and rugs are similar to Velvets but have an uncut pile, and like Body Brussels, they are not suitable for hotel use.

3. *Axminsters*.

This kind of weave is made in a way somewhat resembling the Jacquard process, although the finished product is of entirely different construction from that of Wiltons. Yarns are colored before weaving, but the process is such that much poorer qualities of yarn may be employed. Thus Axminsters are less standard in quality than the two preceding varieties. Good Axminsters, however, are satisfactory and have many good hotel uses. As to appearance, Axminsters have one big advantage—they are made in many bright and attractive color effects which fit in well with many kinds of decorative schemes. Axminsters as a whole are classed as moderate priced carpets; there is large price range and perhaps a still larger range in quality.

Chenilles are very high priced carpets of extremely deep pile and belong to the same general

class as Axminsters, although they are of far superior quality. They are made almost exclusively in solid colors and in broad widths. They are not much used in hotel work and are rapidly being displaced by broadloom Wiltons and Velvets.

4. *Hand Tufted Rugs*.

These fine imported rugs can be had with an exceedingly deep pile and are made in designs of great beauty. They are splendid for use in lobbies and similar places and are frequently used in spite of their high price.

Oriental Rugs do not lend themselves much to hotel use. Small orientals, however, are sometimes used as throw rugs to afford spots of color in apartments carpeted in plain solid colors.

The great bulk of carpet yardage in hotels is divided between Wiltons, Velvets and Axminsters. Between these three a hot contest is waged for favor and many arguments are raised in favor of each.

For many years, Wilton carpets have been held up as the highest grade and most durable material avail-



Carpet Specially Woven with Crests, Hotel Book-Cadillac, Detroit



Living Room, Hotel Mayflower, Washington, D. C.

able. That they are very long lived is undeniable and where the heaviest kind of traffic was found the rule has been to select high grade Wiltons despite their cost. Of recent years, however, this claim to superior durability has been severely shaken by the performance of the better grades of Velvet carpets. In fact, a recent test conducted by large carpet users would indicate that Velvet carpets of high quality were better able to withstand severe punishment than even Wiltons. The carpet users mentioned for many years had used only the finest grade of Wilton carpets. In order to verify the soundness of this policy they resorted to a careful test. Much to their surprise the results strongly favored high grade Velvet carpets as against the finest Wiltons which cost far more. As a result of this test these operators now have switched to Velvet carpets for their new installations.

Of course, there are many grades of both kinds of carpets and it is not expected that a low priced Velvet can stand up against the best Wiltons. The fact remains, however, that Velvet carpets have proved so successful from the standpoint of wearing quality that they are very rapidly gaining in favor with hotel carpet experts.

As to designs and coloring, Wiltons have likewise been held up as superior to all others, but here again the Velvet carpet is making great inroads. The ways of manufacturing and coloring Velvet carpets have been so much improved during recent years that in the better qualities the colors may be depended on to be as good as in any other kind of floor covering fabric.

Axminsters were little used in hotels prior to the war, but during the war Velvet carpet manufacturers were occupied with a great deal of government work,

which caused hotels to turn to Axminsters as a substitute. A great deal of Axminster carpet is still being used, but Velvets are regaining much of the lost ground, as it is felt that their all around qualities are superior and that their standard of quality is more to be depended on, especially in the medium price range. The main difficulty with Axminster carpets lies in the fact that the manufacturing processes make it possible to use poorer quality material than in Wiltons and Velvets. The yarns may be mixed, poorly scoured, greasy or otherwise undesirable and may be coarsely woven. This leaves the purchaser in a position where he stands a greater chance of getting

an inferior product without knowing it.

Naturally the requirements of the different parts of the hotel must be thoroughly understood if the selection is to be satisfactory. This is a matter of experience and should be carried out only with the aid of a carpet expert who has had a long contact with hotel work.

In a general way it may be said that guest rooms may be carpeted with Velvets, Wiltons or Axminsters, with the preference on Velvets. Corridors usually use seamless Velvets and good Axminsters. In lounges and mezzanines, Wiltons are often favored because of the fine patterns which are easily available, although Velvets should be considered at least equal, and if ordered enough in advance can be secured in just as satisfactory designs and usually at a lower cost. Good Axminsters are also much used because of their brilliant designs and colors. The same is true of dining rooms, except that Axminsters are less in favor here because they give out more lint and hence are not so sanitary. In lobbies, rugs are used as a rule, and for this high pile domestic fabrics or imported hand tufted rugs



Living Room, The Warwick, New York



Typical Guest Room, Hotel Book-Cadillac, Detroit

are selected. Carpeting for stairways is a special problem. For this only Wiltons or Velvets should be used, as Axminsters are definitely unsatisfactory.

Shedding. All cut pile carpets will shed their nap for a certain period of time. This is not due to any defect in the fabric, but is caused by bits of the wool which have been sheared off in cutting the pile and which fall back into the carpet, to become dislodged later. Axminsters shed more than either Wiltons or Velvets and there is reason to believe that this is sometimes due to bits of the nap actually coming out, as the shedding continues for a much longer time.

Shading. All cut pile fabrics will shade, and this again is no defect, but merely is caused by an unequal crushing of the nap. Shading is more pronounced in worsted than in wool fabrics, and is, of course, not easily noticed in pattern goods. It has been found that carpets laid over Ozite carpet cushion shade much less than those under which the old fashioned paper lining is used.

Selection of Patterns

In selecting patterns and colorings, of course, the chief concern will be to find carpets which will harmonize with the furnishing scheme for each room. If this is delayed until a short time before delivery must be made, it will be necessary to choose between stock designs which often results in adopting a grade which is not the most economical or a pattern or coloring not so suitable for the space. It is much better to make the carpet selections about six months beforehand, for by so doing special mill runs can be made to give the designs wanted in exactly the grade and weave that is best for the purpose.

Another worthwhile idea is to restrict guest room carpets to two or three good designs. If this is done, it will result in a substantial saving in cutting and matching if the carpets need to be made over after several years of use.

There are comparatively few organizations which are properly equipped to handle the cutting and laying for a hotel. Most buyers do not realize this and neither do they understand how this influences the service they secure from their carpets. There is a great deal of difference in the wear of carpets which are correctly stretched and laid and those which are not, and while this is especially serious in large rooms and in difficult spaces such as stairs, ramps, etc., it is sufficiently important in all cases to make it well worth consideration. A carpet organization which is experienced in hotel and other public work can save the purchaser in many ways which do not appear in the price quotations at all. For example, in the cutting, a house with the capacity to handle a large number of rooms at once can reduce the amount of waste in matching patterns to a much lower figure than ordinarily would be the case—and waste is a considerable item in the carpet costs.

Paper Lining Unsatisfactory

What goes under the carpet is just as important as the carpet itself. Five or ten years ago, carpets were practically all laid over a paper and cotton lining. In guest rooms, one thickness was used as a rule, and in public rooms, there were two or more. Paper lining is very unsatisfactory. Even when new it has little softness, and within a short time it becomes hard and unyielding. Where two pieces of

lining are overlapped, a hard ridge is produced, and the carpet quickly wears out along this ridge. Where several layers of paper are used, the layers have a tendency to creep and buckle, forming hard lumps and ridges which likewise cause the carpet to wear over them. Paper lining is also hard to handle in laying the carpets, and being quite perishable, can seldom be taken up and used more than once.

The advent of Ozite carpet cushion changed carpet laying methods over night. It is such a vast improvement over the old method that in the short space of about four years it has become the most widely used single hotel product in existence.

Ozite carpet cushion is a product made of 100% new virgin animal hair specially selected and reinforced through the center with a strengthening web. It is manufactured under patented processes. The animal hair is first scoured, then sterilized, *ozonized*, dry cleaned, picked and carded into a loose layer or "bat." It is felted by means of heavy steam heated plates under tons of pressure, which reduces a bat nearly a foot thick to a fraction of an inch. The result is a cushion of permanent resilience, which will never lump, buckle or pack down even under the most severe wear.

The effect of Ozite cushion under rugs is astonishing. It has been repeatedly proved by technical tests and by actual experience that it literally doubles the durability of the floor coverings.

Carpets wear by friction. Between the constant pounding of hard shod feet above and the unyielding floor below, they are simply ground to pieces as if between millstones. With Ozite, the carpets are laid over a soft cushion composed of millions of tiny springlike hairs that absorbs the pounding and reduces the friction to a minimum, thus greatly prolonging the carpet's length of service.

In addition to this feature, the use of Ozite cushion increases the softness of the carpet and produces a most luxurious effect even with inexpensive fabrics.

Ozite has numerous other advantages. It facilitates carpet laying, clings flat to the floor without fastening, reduces noise, is fire resisting and is absolutely odorless and sanitary. It is ideal for use over concrete floors, and acts as an insulating blanket, keeping the floors warm. The Ozite cushion itself is practically everlasting and may be taken up and relaid repeatedly without damaging it. Due to the remarkable properties of animal hair, it retains its softness and resilience for an indefinite length of years. Thus, in contrast to paper lining, it is a permanent investment.

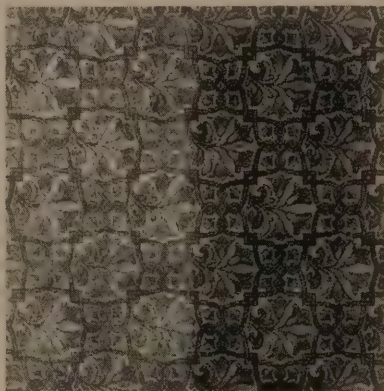
There is a special and exclusive quality of Ozite carpet cushion which deserves particular attention. *It is perfectly odorless, sanitary and is permanently moth proofed.* This is of extreme importance, as no carpet cushion should ever be used which is not so treated.

Hotel Carpeting Is a Special Business

If there is any hotel furnishing commodity which demands the services of a responsible and expert adviser to assist the hotel operator, it is carpeting. The amount of money to be invested makes it a very serious matter to

consider and the highly technical differences between qualities and weaves are quite beyond the ability of the average hotel man to judge with any degree of accuracy.

Carpeting is a separate branch of the floor covering business, and the problems to be met differ materially from those involved in handling rugs. The real carpet merchant is a specialist and, particularly where he deals with large public contracts he must have an unusual training. There are very few such organizations. Of these, the Pick-Barth Companies are both the largest and most experienced. Their floor covering business is handled by technical specialists whose experience in public work enables them to give exceptional service and counsel.



Without
Ozite

With
Ozite

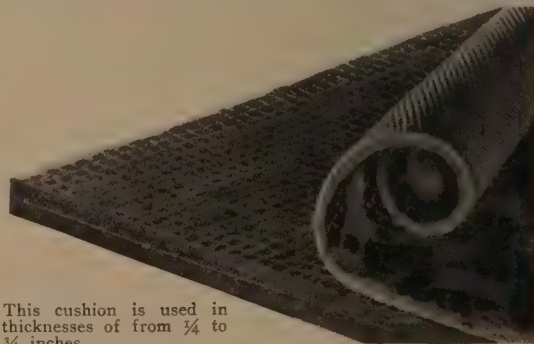
This unretouched photograph visibly shows the effect of Ozite. The carpet was part of a test installation laid in a heavily used passage. The left side had its nap crushed flat by the pounding of feet, which not only meant it was wearing rapidly, but made it present a worn and faded appearance. The right side, laid over Ozite and receiving exactly the same wear, not only was much less affected by wear, but looked fresh and natural in color, due to its pile or nap remaining erect.

How Ozite Cushion Saves Wear and Tear on Carpets

The use of hair felt cushion beneath carpets, an innovation a few years back, is now almost the universal practice. While the Ozite is more expensive than the ordinary paper lining formerly used, its economic advantages are so overwhelming that they far overbalance its cost. When laid with



ordinary linings, the carpet is simply ground to pieces between the sharp, hard heel above and the unyielding floor beneath. Ozite eliminates the grinding action by cushioning the carpet from beneath, thus greatly prolonging its life. The use of Ozite also facilitates laying, retains its resilience indefinitely, never wears out, is clean and odorless, is sound deadening and heat insulating, may be used over a concrete floor, and is *moth proofed*. In addition to these practical advantages, it greatly enhances the effect of the carpets by making them feel softer and more luxurious.



This cushion is used in thicknesses of from $\frac{3}{4}$ to $\frac{1}{4}$ inches.

Interior Decoration and Drapery Effects From the Hotel Book Cadillac, Detroit



Drapery treatment in one of the Ballrooms



Wall elevation showing decorating treatment

The paintings shown here are from the studios of the PICK-BARTH Companies, who executed all of the draperies for the Hotel Book Cadillac

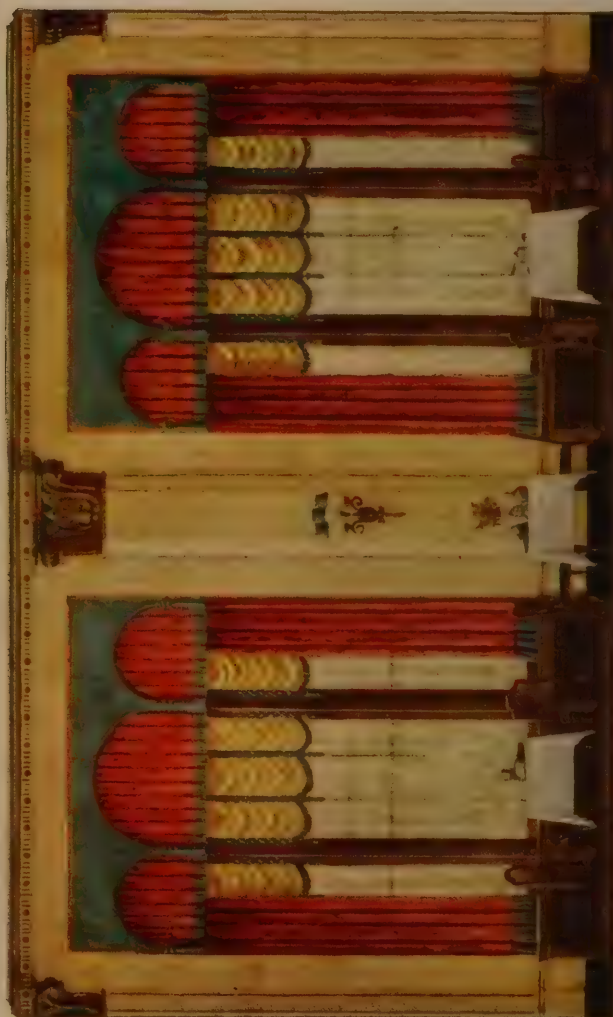
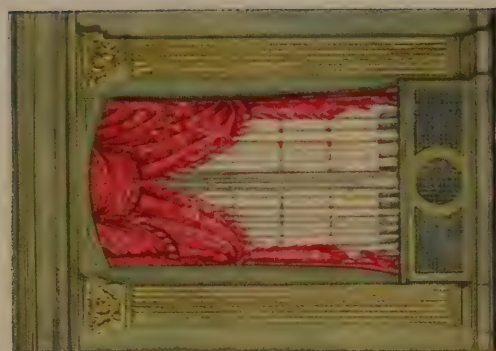


The complete contract for the furnishings and equipment of the Hotel Book Cadillac was executed by the PICK-BARTH Companies

Drapery treatment in the English Grill

Examples of Hotel Public Room Drapery Treatment

Designed by the PICK-BARTH Interior Decoration Studios



Practical Requirements of Hotel Draperies

Certain parts of the hotel's furnishings form a background and others might be termed the highlights or finishing touches. Draperies are in the latter class. They are among the things which add the final note of livableness and style which is needed to transform a room and some furniture into an inviting habitation.

Smartness in style and adroit use of color effects are so obviously important that they usually receive the lion's share of attention. However, it is not within the scope of our subject to discuss such matters here, and we will confine ourselves to pointing out some of the more important practical considerations.

It will be well for the hotel operator to consider that in draperies, he is purchasing creative service as well as merchandise. Given identically the same materials to work with, a clever designer will produce effects far more desirable than will a man of less skill or creativeness. Services of decorators of acknowledged ability should weigh heavily in the scales.

The main economic problems concerning drapes have to do with depreciation and maintenance, and only to a smaller degree with utility. The things which will determine the satisfaction received are (1) the type of drapery design used, (2) the fabrics, (3) the way the drapes are made up and (4) hardware and fittings.

In mentioning the type of drapes here we do not refer to the artistic style, but to the practical fea-



Boudoir hangings, Wade Park Manor, Cleveland, Ohio

tures of design. A drapery may give a beautiful effect, but because of its design might prove highly impractical for the particular place in which it is used. This might be due to the way a window operated mechanically or to entirely different causes, some of which are peculiar to hotels and similar places. The wrong choice in this respect has a bad effect on the utility of the draperies and likewise may increase their depreciation and upkeep costs by subjecting them to undue soiling, weathering and wear.

Faulty judgment in the choice of designs is common enough, but it is of small importance compared with the mistakes made in the selection of fabrics.

The trouble is that the color and design of a material can be seen, but its practical qualities are left to the imagination. If it looks well you want to buy it; you either neglect the importance of its loom woven qualities or you try to guess its value. You ought not to guess and it shouldn't be necessary for you to try. Those with whom you deal should know from experience what is a good investment for a hotel and what is not. If they lack this definite knowledge, you should not consider dealing with them; it isn't worth the risk—there is too much at stake.

Almost all drapery fabrics are pretty to look at while new. They are often specially treated in their manufacture to present the best possible appearance to the purchaser. But think how often



Lounge draperies, The Mayflower, Washington, D. C.



Lobby Windows, Bismarck Hotel, Chicago



Lounge draperies, Park Lane Villa, Cleveland, Ohio



Women's Lounge, Webster Hall,
Pittsburgh, Pa.



Dining Room, Vinoy Park Hotel,
St. Petersburg, Fla.



Afternoon Tea Room, Hotel Book
Cadillac, Detroit, Mich.

you have heard it told that after its first washing a fabric loses beauty and soils more quickly. First appearance isn't what counts.

All fabrics are subjected to deterioration from light, air, moisture and age. In tropical, moist or oceanic climates or in some exposures, the action of these destructive agencies is hastened, and unless provided against the consequences are very serious. It must not be assumed, however, that extraordinary conditions are the only ones to be considered. Under ordinary circumstances deterioration is severe enough to cause plenty of concern.

The choice of materials influences cost of cleaning and deterioration from cleaning processes, too. While some drapery effects necessitate the use of light colored and easily soiled materials this should be eliminated as far as compatible with pleasing



Tapestry hang-
ings, The War-
wick, New
York

appearance, and an effort should be made to procure designs and textures which retain their appearance for the longest time without attention. Furthermore by wise selection and designing the cost of the actual processes of cleaning may be held satisfactorily low. And, most important, many materials deteriorate in appearance very greatly when laundered, which may show itself in numerous ways—by fading of colors, loss of body, the filling up of open weaves and loss of sheen or luster to say nothing of actual wear and tear.

Practical qualities cannot be judged by the ordinary man; they do not make themselves known by the superficial appearance. Even when an expert tells you whether a fabric is sunfast, color fast, washable, etc., he bases his judgment primarily on knowledge of the manufacturing processes and of actual performance of ma-



Wall hangings,
The Warwick, New York



Lounge and Dining Room,
The Graemere, Chicago



Ballroom, Wade Park Manor,
Cleveland, Ohio



Dining Room, President Apartments,
Atlantic City, N. J.



Lounge, Pontchartrain Apartments,
New Orleans, La.



Ballroom, Hotel Book Cadillac,
Detroit, Mich.



Dining Room, Hotel Floridan,
Tampa, Fla.

terials, rather than upon the appearance of the sample shown him. Do not assume either that the name of a fabric is a definite indication of its quality. The term marquissette, for example, embraces a wide range of grades some of which are twice as high in cost as others. Names of materials are confusing, too, as they often leave no clear distinction in a buyer's mind between genuine and imitation products.

It would surprise many to know how many different ways his drapes might be made up with the same fabrics and the same design. Actually, what you get from your materials depends to a very great degree on the method of making and the care and skill of the workmanship. Perhaps the best way to visualize this is to compare it with dressmaking. No one considers that materials and designs are the only things which determine the wearing qualities or permanent



Living Room,
The Mayflower,
Washington,
D. C.



Living Room,
The Warwick, New York

appearance of a dress. They examine the way the dress is cut and sewed, how it is lined and reinforced, the way the seams are made and bound, the quality of the trimmings and a dozen other details. Drapery making is in just the same class. How skillfully and wisely it is handled directly bears on the way they hang, how they operate, how they keep their shape, how they will launder or clean, and how they are protected against wear and exposure.

Then, too, there is the question of hardware, which is no small variable element in cost, and which has importance both from the standpoint of convenience and appearance and of maintenance.

When all is said, therefore, confidence in a reliable and experienced purveyor counts most—and if you must economize this is doubly important, for it takes an expert to hold costs low without jeopardizing value.



Dining Room, Hotel Richard
McAllister, Hanover, Pa.



Lobby, The Graemere,
Chicago



Dining Room, Hotel Retlaw,
Fond du Lac, Wis.

Hotel Guest Room Window Treatments



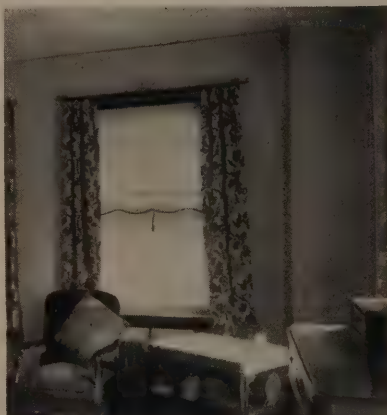
Westover Apartments, New York City

WHILE the draperies and hangings of the bedrooms or living rooms in a hotel should achieve the same atmosphere as a tastefully furnished private residence, the actual similarity between hotel and domestic drapes is only one of superficial appearance. The value of experienced Hotel Drapery Specialists lies in their ability to produce beautiful effects without a sacrifice of those practical qualities which are a prime requirement of hotel service.

The drapery treatments illustrated on this page were designed and produced by The PICK-BARTH Companies



Belcrest Apartments, Detroit, Mich.



Hotel Duluth, Duluth, Minn.



Oak Park Manor, Oak Park, Ill.



The Mayflower, Washington, D. C.



Hotel Randolph, Milwaukee, Wis.



44th Street Hotel, New York



Country Club Apartments, Chicago



Melrose Apartments, Chicago

Chapter XVI

Linens and Bedding

As has been stated in the previous chapter on Hotel Draperies and also will be noted in a later chapter on Carpets, the purchase of textiles of any kind for hotel use is an extremely difficult task due to the wide range of qualities. This fact is particularly true in the case of linens for hotel use where there is an almost unlimited variety of qualities and grades.

The extent to which this range of quality goes may be gleaned from the following facts. In the first place, the term "Linen" itself is misleading for it is used not only to designate pure linen fabrics, but also Union Linen, which is linen and cotton mixed, and likewise all-cotton materials. Secondly, linen is made in several different weaves such as Crash, Damask, Sheeting, Cambric, etc., and each of these weaves are made in a large number of grades. Pure Linen Crash may be had in 40 different qualities; Pure Linen Damask is made in from 25 to 30 qualities; Pure Linen Sheetings and Pure Linen Cambric are each made in about 20 qualities. Union Linen and Cotton materials have about the same range of quality in each of the different weaves—and this is not all. Pure Linen Damask, for instance, is also graded by the length of the fiber in the yarn; secondly, the tensile strength of the fiber; third, the number of fibers in the yarn; fourth, the number of times the yarn is twisted per inch to hold the fibers together; and lastly the number of yarns or threads woven in an inch of goods. Qualities by thread count vary from 64 to 360 threads per square inch. Other weaves in Pure Linen are graded the same way, as well as all the weaves in both Union Linen and Cotton materials.

This staggering variety of grades and qualities of Bed and Table Linens applies also in a lesser degree to Towels, Blankets and Bed Spreads. This demonstrates the fact that the hotel man must use the greatest care when buying these items in order to determine exactly the quality that you are getting. "Pure Linen" and "thread count" mean absolutely nothing unless the other facts noted above are known. It is not safe to guess at the quality, it is much better to buy brands that you know other successful hotel operators are using. Best of all, let a hotel linen specialist advise you as to your linen

problems and do business with a house that you can rely on.

Bed Linen

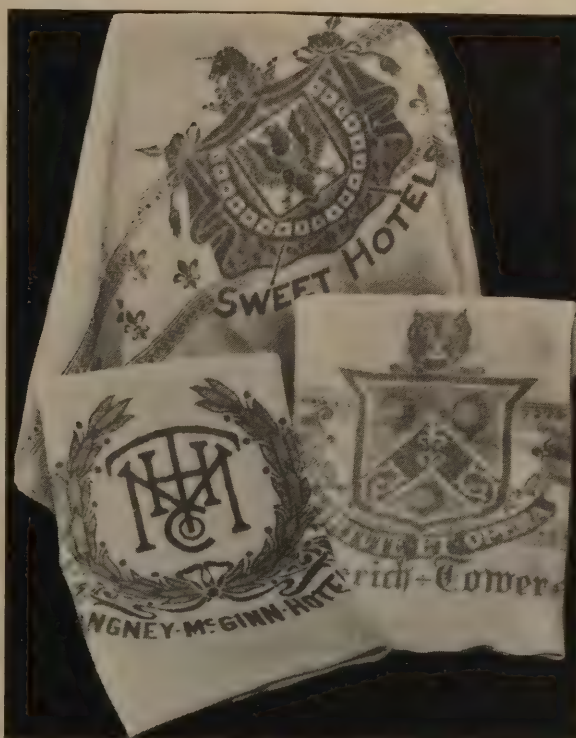
Sheets and Pillow Cases are probably the most used and abused items of equipment in the hotel as they are being washed, mangled and handled almost constantly. They may be made either of pure linen, fine cotton percale or coarser grades of cotton. There are many grades of each of these and even the experienced buyer is often misled unless he has an expert's advice to guide him. A sheet may contain a dressing or filling and you are told that it will weigh so much and the thread count is so and so. These statements may be true, but they mean nothing

unless you know the thread contains long fiber, proper tension and finish. The real solution of the problem is to insist on high quality merchandise. It may cost 10 or 15% more than ordinary goods, but is real economy for it will last practically twice as long.

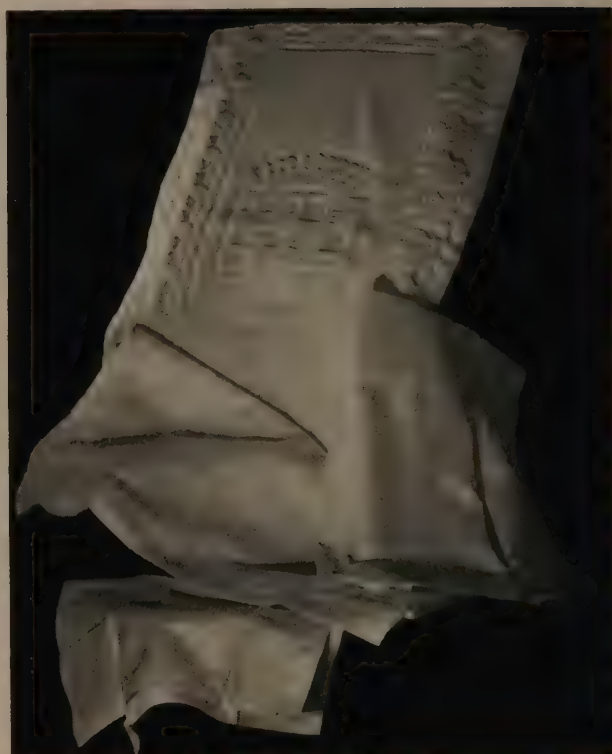
Quantity also should receive careful consideration for ordering too little will hinder operation and ordering too much is an extravagance. Quantity is really determined by the character of the hotel itself. The average hotel requires four to six sheets for each bed and the same number of pillow cases. Other hotels have as high as eight or ten sheets and pillow cases for each bed. Some hotels use nothing but pure linen sheets, while

others use fine cotton percale or coarser grades of cotton—it all depends on the class of service you want to supply to your guests.

Bed Spreads are items which should likewise be selected with great care for they are a real factor in the appearance of the guest room. Appearance, quality, color and design are the things to note particularly in their selection. White Satin or Marseilles with crest woven in are pleasing in appearance and will wear well. Colored satin with crest of another color and figures to match is a practical and attractive spread that does not show soil, wears well and launders easily. It is made long enough to cover the pillows and is far superior in appearance and wear to the Rayon and Crinkled Striped Dimities of which there are so many styles and quali-



Typical Examples of Crested Blankets



Crested Table Linen, Towels and Bath Mats, Hotel Book-Cadillac, Detroit

ties on the market. For the small hotel or kitchenette apartment there is an inexpensive Jacquard woven spread that may be had long enough to cover pillows and in many color combinations. The proper number of bed spreads is also essential, three spreads for each two beds being the requirement for the average hotel.

Mattress Protectors are another necessary item which should not be overlooked. Here also there are several different qualities depending on the grade and thickness of the filling, the quality of the covering, the kind of stitching, the distance between the rows of stitching and the method used in finishing the edges. Quality is here again important because of the hard wear of service and the frequent launderings necessary.

Blankets

Blankets present another case where there is a wide range of quality and careful buying should be the rule. Many blankets are said to be "all wool," but this again is a much-overworked and misunderstood term. Blankets made of 100% wool are made in $3\frac{1}{2}$, 4, 5, 6 and 7 lb. grades ranging in price from \$4.00 to \$42.00, and in sizes varying from 60 to 80 inches in width and 76 to 90 inches in length. There are also mixed wool and cotton blankets ranging from 90% down to 10% wool and almost every grade has its line of weights and sizes similar to the 100% wool blankets.

Double Blankets, all wool or part wool, are made in various colors, but are most frequently white with crest stamped in blue or other colors that will not wash out. Dainty colored block plaids are also favored.

Top or Throw Blankets of camel's hair, all wool, wool and cotton mixed, or all cotton may be had,

with or without the crest woven in, in almost any desired color or color combinations. Throw Blankets are used during the summer months while the double blankets are stored away, also as an extra covering in cold weather, thus serving a double purpose. The size and weight of the blankets used is determined largely by the type of service rendered. Three blankets for every two beds is the quantity required for the average hotel.

Dresser Scarfs

The appearance of your guest rooms is greatly improved when you give serious consideration to such items as Dresser Scarfs with Night Stand Covers to match, Pin Cushions and Pin Cushion Covers. They may be had in plain white cotton goods, ecru colored cotton crash, linen crash, hemmed or hemstitched, colored embroidered edges or monogram, or even with linen centers and lace edges or all lace in white, ecru or gold. Razor Cloths and Shoe Cloths are a real addition to your service and will repay their cost not only in saving your towels, but also in publicity by having your hotel advertising printed on them.

Towels

There are three kinds of towels for hotel service—Hand Towels, Face Towels and Bath Towels. Hand Towels, if placed in the room, will be used more often than Face Towels. They cost less to launder than Face Towels and can be replaced more cheaply when worn out. The proper size for Hand Towels is 15 in. by 20 in. Face Towels range in size from 17 in. by 32 in., 18 in. by 36 in. to 20 in. by 40 in. Hand and Face Towels should be carefully selected so as to assure fine, soft, absorbing quality that will give satisfactory wear. They may

be had in Pure Linen, Union Linen or Cotton, depending on the class of service you wish to give. Six to eight Hand and Face Towels for each room is a sufficient quantity.

Bath Towels are a very important item due to the hard usage they are subjected to. They should be made of soft, closely woven, absorbent quality yarn that will withstand repeated laundering. Towels woven too loosely soon become flimsy and require replacement, whereas a closer woven towel will last twice as long and prove a real economy. The better towels, made from yarns containing the longer and better grade fibers, will last much longer and are more pleasant to use. The best sizes for Bath Towels are 22 in. by 44 in. or 24 in. by 48 in. Four to six Bath Towels per room is the average requirement. Most hotels have their name or crest either woven or stamped in all of their towels.

Bath Mats are necessary articles in every well-equipped bathroom and in every hotel where high grade service is the rule. They are similar to towels in that they should be high quality, closely woven and very absorbent. In the best hotels very heavy mats are used, 24 in. by 48 in. in size, with name or crest woven in either color or white. Other mats are made in medium heavy, medium and light weight grades and in sizes 22 in. by 40 in., 20 in. by 36 in. and 20 in. by 30 in. Three mats to every two bathrooms is the quantity usually figured.

Table Linens

The proper selection of Table Linens is one of the most important problems the hotel man has to face. Here quality is of importance not only on account of serviceability, but appearance as well. There are many qualities, styles and finishes of Table Linens and here again experience, reliability and good judgment must be called into service to insure wise selection. Tables first should be covered with a washable padding cut to proper size and having finished edges. The table cloth proper may be pure linen, a good quality of cotton damask with Basco or lintless finish, a lighter weight Basco finish, or even a mercerized damask not having a Basco finish. Any of these grades are suitable and may be had with or without a crest or name woven in and may be selected according to the service desired. It is real economy, however, to buy the better qualities for though their original cost is higher, they will give considerably longer service than the cheaper grades.

For Coffee Shops and Tea Rooms, colored cloths in red, blue or tan and white checked patterns, or white cloths with colored borders and napkins to match are much in favor. Cafeterias and low-priced lunch rooms ordinarily use plain white Indian Head or Butchers Linen table cloths, tops and napkins with name embroidered in color to insure return from the laundry.

Table Cloths should hang on all sides from 10 to 14 inches. The quantity usually ranges from 3 to 6 cloths per table. The use of Table Tops, of the same design and quality as the cloth itself, as a cover effects a saving in the laundering and replacement of the table cloths themselves. The Table Top should hang on all sides about 5 or 6 inches and 4 to 8 are usually figured for each table. Napkins

should match the table cloth and the usual sizes are 22 in. by 22 in. and 24 in. by 24 in. The average requirement is 6 to 10 napkins per plate.

Uniforms

Your arriving guests often get their first impression of your hotel and the type of service that you render by the appearance of your employees. Every employee with whom the guest comes in contact, except the front office, should have an attractive uniform in order that they may always present a trim and neat appearance. Quality is important here also for otherwise the uniforms will quickly become worn and shabby looking and actually defeat their own purpose.

Waiters' Uniforms should be given careful consideration. They range from complete full dress to white duck trimmed with colored braid, depending on the class of service. Well uniformed waiters are a real asset to any dining room and go a long way in giving the impression of good service to your guests. If Bus Boys are a part of your service, they should be supplied with neat appearing coats of black mohair or sateen, white duck or twill of military cut or roll collar style, either with or without braid trimming.

In dining rooms where waitresses are used, their dresses may be of black poplin with white collar, cuffs and apron. Hoover style aprons may be had in white or a combination of colors. There are various other styles and qualities of aprons and care should be used that head bands are made to match. Three complete outfits are necessary for each waitress to allow for laundering.

Bell Boys, Page Boys and Elevator Boys or Girls are other employees who should be carefully uniformed as they are among the first with whom your guests will come in contact. These uniforms may be either conservative or colorful as you desire, but they should always be of high quality and good fit. Most hotels have uniforms of light weight and color for their employees in summer and the darker and heavier uniforms for the rest of the year.

A well uniformed Door Man is also a real asset to your hotel. His uniform should be of military cut and appearance with cap to match, and he also should be supplied with a summer uniform. Porters also should have their uniform and cap as they are frequently in contact with your guests.

Get an Expert's Advice

As stated before, it is certainly to your advantage to have the advice of a linen expert to assist you in the wise selection of Bed and Table Linens, Bedding, Towels, Uniforms, etc., for your hotel. It is often necessary to choose between various types and qualities of fabrics for the purpose you have in mind; it is very important that you buy the proper sizes and quantities of various items; above all it is extremely essential that you get fabrics woven expressly for hotel service and not the grades made for domestic use.

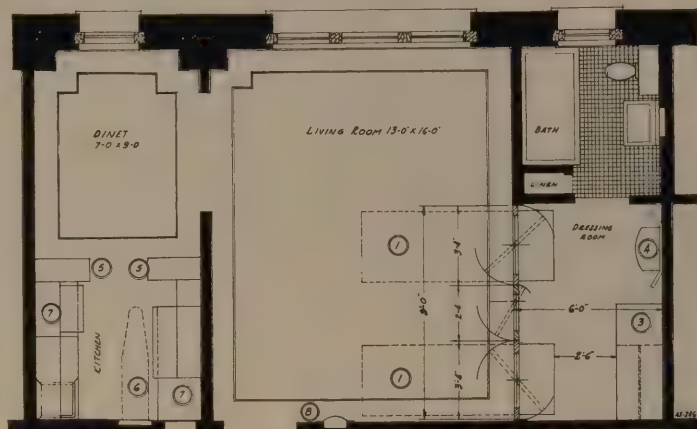
The Pick-Barth Companies have linen experts that will gladly assist you with these problems. Our many years of experience in the hotel linen field, our large stock and our own linen workrooms are at your service to help you buy wisely and economically.

Examples of the Application of Space Saving Conveniences for Efficiency Planning

THESE plans are used by the courtesy of the "White" Door Bed Company, Chicago, (affiliated with the PICK-BARTH Companies) whose standardized built-in conveniences are used as illustrations in this chapter.

KEY TO PLANS

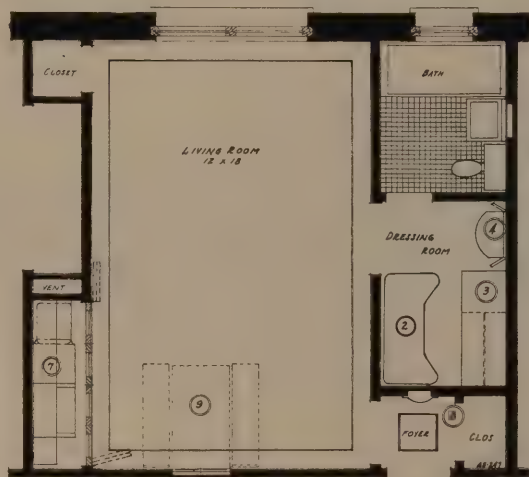
- 1—Door Bed
- 2—Roller Bed
- 3—Built-In Wardrobe Cabinet
- 4—Built-In Dressing Table
- 5—China Cabinets
- 6—Built-In Ironing Board
- 7—Unit Built Kitchen Cabinet
- 8—Built-In Telephone Niche
- 9—Built-In Breakfast Nook
- 10—Space Saving Range



Typical Two Room Kitchenette Apartment with Twin Door Beds



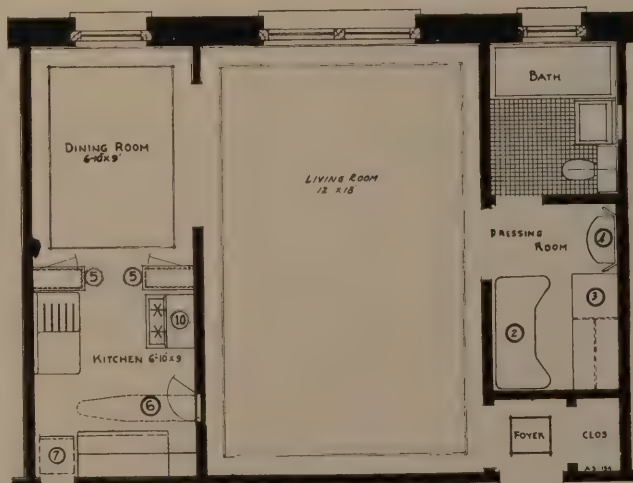
View of Kitchenette such as shown in the lower left hand plan on this page



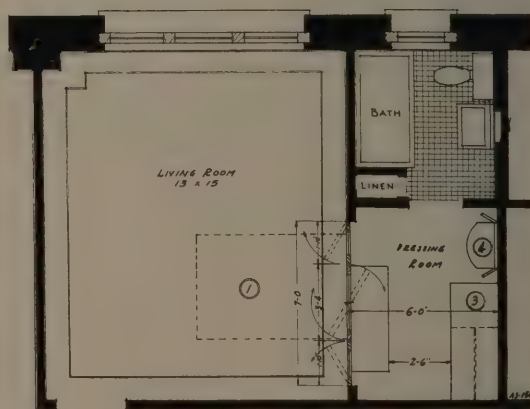
Typical One Room Kitchenette Apartment with Roller Bed



An apartment with twin Door Beds, showing their perfect concealment when not in use



Typical Two Room Kitchenette Apartment with Roller Bed



Typical Hotel Guest Room with Door Bed and Dressing Room

Chapter XVII

The Application of Space Saving Conveniences in Efficiency Planning

In previous chapters on the planning of hotels and apartment hotels, reference is frequently made to the use of space saving devices both in hotel guest rooms and in so called "Efficiency Apartments." This method of planning has become so successful that it is rare that a residential building is designed without one or more space saving fixtures being brought into use. These devices are among those rare means for economy which please everyone. While for the owner they are desirable because they cut building costs and increase revenue, in most cases they also are genuine conveniences which because of their appeal from that standpoint alone have been found to help rent the apartments.

From the experience of the last few years, it is safe to predict that the practice of "Efficiency Planning" is due to become even more widespread than it is today, and that it will be applied to various types of buildings which so far have not been so much affected—such as commercial hotels, dormitories, Y. M. C. A.'s, and the like. In commercial hotels the idea has already been adopted to quite an extent for sample rooms, and it is interesting to observe that many hotels with sample rooms so designed have been awakened to the possibilities of selling the same type of rooms to guests in general. A well-known case of this is the Hotel Gibson of Cincinnati, which makes quite a feature of their "One Room Apartments."

Inasmuch as efficiency planning is entirely based upon the use of various space saving fixtures and devices, the problem resolves itself into designing the apartment around them. A study of the different kinds of conveniences, their correct use and the services they are capable of performing is, therefore, worthwhile; such is the subject which we will discuss briefly in this chapter.

Space saving devices are of two general classes—those which save bedroom space and those which reduce the kitchen and dining room area. Let us discuss these classes separately.

Saving Bedroom Space

Naturally this problem principally concerns the disappearing bed. Five or ten years ago, when the practice of saving space was in its early development, the use of a concealed bed was considered sufficient to compensate for the elimination of an entire bedroom. Soon, however, it became apparent that this resulted in a serious loss of convenience. Recent development of space saving devices to be used in combination with disappearing beds have changed this condition, and it is now possible to reduce bedroom space 50% to 75% while still giving the tenant living conveniences which will actually be satisfactory. This is accomplished by the use of a bedroom unit which consists of a

disappearing bed having a slightly enlarged closet fitted up as a private dressing room.

Types of Disappearing Beds

There are many disappearing beds on the market, with rather widely varying methods of construction and mechanical operation and we shall not attempt to make comparison of their relative merits, as our concern here has chiefly to do with the types of installations available, and what they are best suited for. The examples shown are the equipment of the "White" Door Bed Company, Chicago (affiliated with the PICK-BARTH Companies).

Door Beds

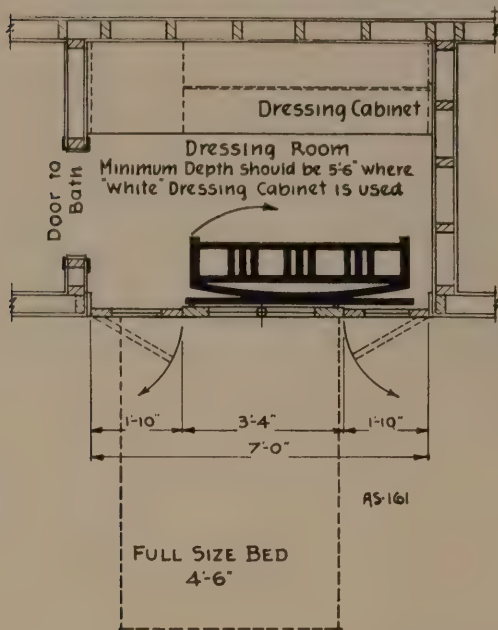
This type of a concealed bed is mounted upon a pivoted door arrangement the nature of which is shown by plans on page 306. This scheme permits an installation which is very economical in space, and in other elements of cost. Its concealment is perfect—particularly if the doors are finished to match the wall treatment of the room. It makes possible the use of the bed closet for a dressing room, thus forming a complete bedroom unit which may be designed for the use of either one or two people, as you desire. This is the arrangement mentioned before. The wardrobe cabinet and dressing table in the dressing room are roomy and convenient, and have been found very popular with tenants. The arrangement of doors permits access to the dressing room at all times whether the door bed is up or down. When the bed is down in the room, the doors all remain closed, leaving the dressing closet in entire privacy. When this combination is applied to the average small apartment, it usually adjoins the bathroom, which is an added convenience. Many variations are possible, and, where space does not permit, a Door Bed installation can be arranged which eliminates the dressing room entirely. A very economical installation of the Door Bed is accomplished by hanging the bed on a wall and concealing it by a curtain. This is not widely used, but it is practical for sleeping porches, servants' quarters and in remodeled buildings.

The Door Bed itself, as illustrated on page 105, is a regular bed of the best and most comfortable kind, mechanically arranged to raise and lower by means of a powerful convolute spring balance and can easily be operated by a small woman or a child. It remains perfectly balanced in any position. It is made in full, three-quarter and twin sizes, and with either coil, box or fabric springs just as in any regular bed. Various designs and finishes are available. When the Door Bed is down in the room it has the same appearance in every respect as a fine stationary bed.

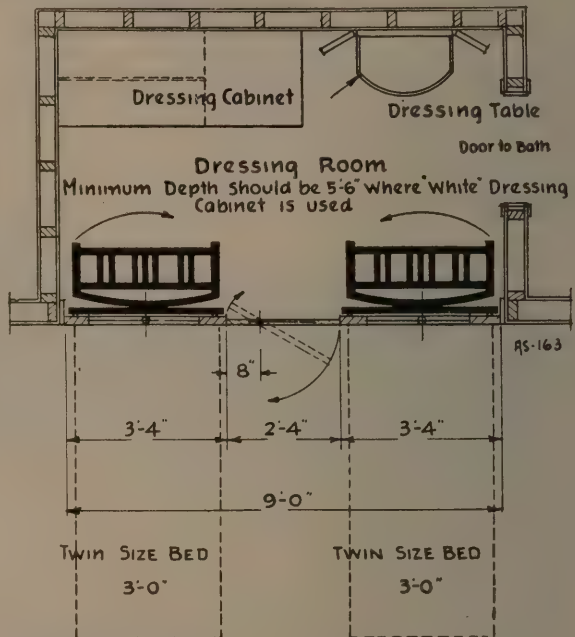
A Few Plans Showing Standard Types of Disappearing Bed Installations

WHILE there are many arrangements of disappearing beds possible, these plans illustrate the three general classes most desirable. Particular attention is called to the use of the bed closet as a dressing room equipped with a built-in dressing cabinet and dressing table. This presents a really adequate substitute for a bedroom, offering the guest real privacy and convenience.

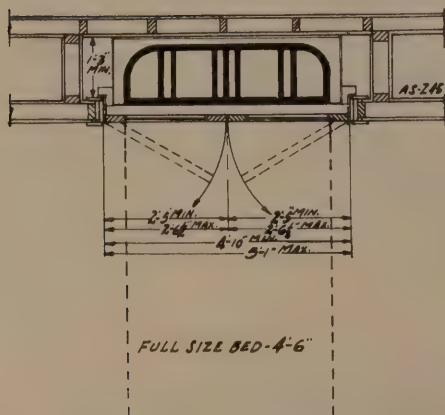
REPRESENTATIVE INSTALLATIONS OF DOOR BEDS



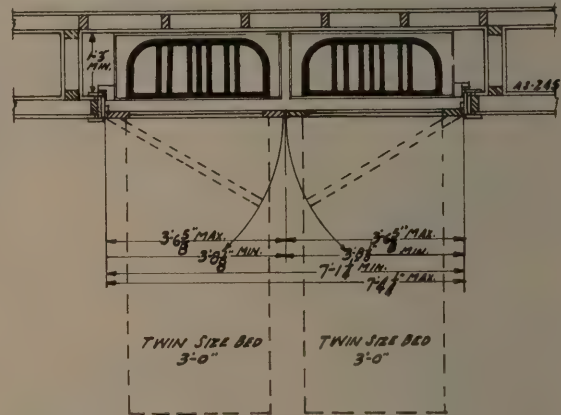
This type of bed is hung on a pivoted door, and revolves out of sight into a closet when not in use. Perfect concealment is possible, as the doors may be treated to match the walls of the room. In these two plans, access may be had to the dressing room behind the beds no matter whether beds are in the closet or down in the room. Doors can be closed when the bed is in either position.



REPRESENTATIVE RECESS BED INSTALLATIONS

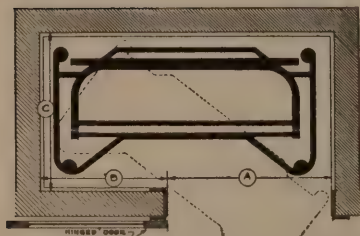


This type of bed is used where space does not permit a closet large enough to be used as a dressing room. The bed rests on the floor of a shallow closet and is attached to the back of the door jamb. It is provided with a mechanism which automatically moves the bed forward as it is being lowered, so that when down, the head of the bed is entirely out in the room.

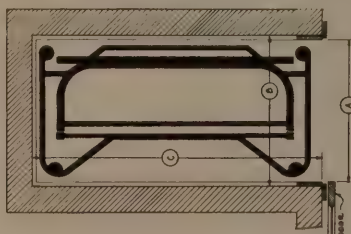


REPRESENTATIVE ROLLER BED INSTALLATIONS

The Roller Bed is mounted upon a wheeled truck, and may be moved to any part of the room that is desired. Requires little closet space.



This closet for a full width Roller Bed has the following dimensions: A—2 ft. 6 in., B—2 ft. 10 in., C—3 ft. 5 in. There are many variations.



For a full width Roller Bed, this type of closet requires the following minimum dimensions: A—2 ft. 6 in., B—2 ft. 8 in., C—5 ft. 2 in.



This closet, for use with twin Roller Beds, requires the following minimum dimensions: A—2 ft. 6 in., B—3 ft. 10 in., C—2 ft. 8 in., D—1 ft. 10 in.

The plans used show the products of The "White" Door Bed Company, Chicago (affiliated with the PICK-BARTH Companies).



THE "WARWICK" RECESS BED

Note that the head of the bed comes out into the room when the bed is down

Recess Beds

This is another type of a concealed bed which is used where space limitations do not permit a bed closet larger than is absolutely essential, and where a bed hung on a pivoted door would, therefore, not be practical. The "Warwick" Recess Bed illustrated here and in the plans on page 306 can be installed in a small shallow closet, where it rests on the floor and is attached to the back side of the door jamb.

The bed is provided with a mechanism which automatically moves it forward as it is being lowered, so that when down, the head of the bed is entirely out in the room. This is a vast improvement over recess beds of the older type which made it necessary for the sleeper to have his head either partly or entirely in the closet.

While the recess bed does not provide the complete convenience which an installation with a dressing room does, it has been found very satisfactory and adequate in commercial hotel sample rooms and even in regular guest rooms. It is comfortable, comes in a variety of attractive designs and finishes, and may be had in full and twin sizes

Roller Beds

The roller bed is a more or less recent development which in a great many cases is even more desirable than either the door bed or the recess bed. It is a bed which is raised and lowered very much like the other two types, but is mounted upon a movable truck. The "Warwick" Roller Bed, which is shown here, works on a kind of cantilever principle which provides perfect balance in almost any position without the use of heavy counterweights. The Roller Bed may be concealed in a very small closet,—often one which would permit no other type of a concealed bed. The closet, in fact, does not have to open directly into the room where the bed is to be used and may be located in a different part of the apartment. This is a considerable advantage in hotel or apartment planning and the Roller Bed is consequently gaining in popularity as it becomes better known.

The Roller Bed is also well liked because it may be let down anywhere in the room so that the furniture arrangement need not be disturbed, and because its location may be varied to suit temperature conditions—in front of windows, etc.—an advantage of great importance, particularly in hot weather. Its truck is fitted with large casters so that it may be moved with very little effort even over thick carpets. Many hotels have found that the Roller Bed is very practical for use in sample rooms. In hotels already built and in older apartment buildings it will often be found that the original clothes closets are of a size to permit the use of a Roller Bed without making any changes.

An ideal method of using the Roller Bed in apartments where it furnishes the principal sleeping accommodation, is to provide a closet large enough for a dressing room, as shown in two plans on page 304. This can then be fitted with a wardrobe cabinet and a dressing table, thus providing complete comfort not only in smaller space than a bedroom occupies, but with the added convenience of being able to roll the bedroom anywhere in the apartment it is desired. See page 306 for plans of representative Roller Bed installations.



The "Warwick" Roller Bed is mounted on a truck and can be rolled to any part of the room desired

Examples of Kitchenettes Designed to Fit Different Conditions of Service

The plans shown on this page show the "Warwick" Kitchen Units and other products of the "White" Door Bed Company, Chicago, (affiliated with The PICK-BARTH Companies).

Full-Sized Kitchenettes—Sufficient for Regular Small Family Cooking

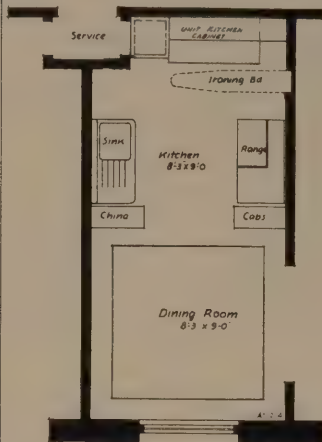


Fig. 1—An ideal arrangement. Note the service hall for incoming supplies and garbage disposal. The cabinet shown is made up of a Refrigerator Unit with outside service door, a Storage and Worktable Unit, a Broom Closet Unit, an Overhead Storage Unit, and a Spice Jar, Flour and Sugar Bin Unit (similar to Arrangement "A" on page 310).

These four plans show the type of kitchenette which is among the most widely used. In all of them the equipment consists of a Kitchen Cabinet made up of various Kitchen Units, a Sink, a Range and two China Cabinets, with a Built-In Ironing Board as an optional feature.

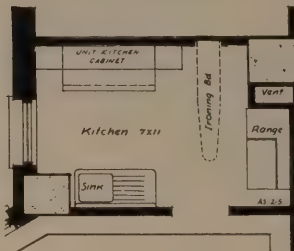


Fig. 2—A Kitchenette in a separate room, designed for use with a regular dining room. The cabinet shown consists of a Broom Closet Unit, a Refrigerator and Worktable Unit, a High Storage Unit, an Overhead Storage Unit, and a Spice Jar Unit (similar to Arrangement "C" on page 310).

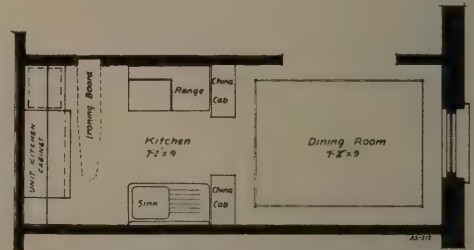


Fig. 3—A variation of the kitchenette shown in Fig. 1. Kitchen Cabinet used is similar to Arrangement "E" on page 310.

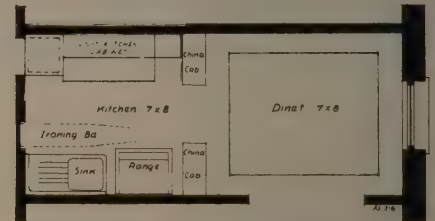


Fig. 4—A small kitchen with a Space Saving Range and a Cabinet similar to Arrangement "A" on page 310.

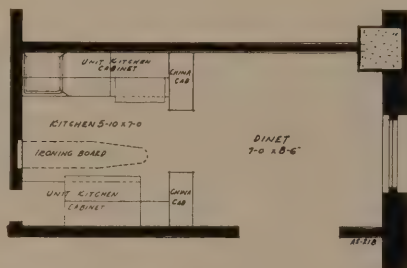


Fig. 5—In this kitchenette, complete kitchen facilities are provided by two cabinets made up of units as described below. One cabinet consists of a Range Unit, a Storage and Drainboard Unit, a Sink Unit, an Overhead Storage Unit, and a Pot and Pan Storage Unit (similar to Arrangement "D" on page 310). The other cabinet is made up of a Refrigerator Unit, a Storage and Worktable Unit, a Broom Closet Unit, an Overhead Storage Unit, and a Spice Jar, Flour and Sugar Bin Unit (similar to Arrangement "A" on page 310). When this kind of arrangement is used a very material reduction in space is achieved.

Medium Small Kitchenettes

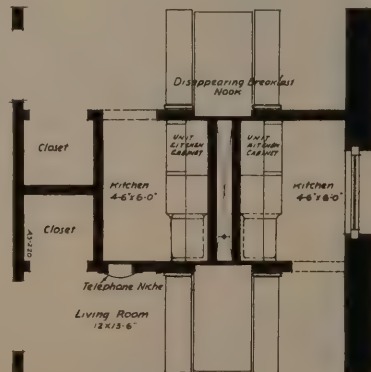


Fig. 6—A tiny kitchenette in a room of its own, adjoining the apartment living room, where a Disappearing Breakfast Nook is installed.

These kitchenettes are not expected to serve full meals but are generally installed where the tenant expects to cook breakfast or light lunches, only preparing larger meals occasionally. Smaller space and facilities are, therefore, provided, the main item of equipment being a Kitchen Cabinet made up of the following Units: a Range Unit, a Refrigerator and Drainboard Unit, a Sink Unit, an Overhead Storage Unit, and a Pot and Pan Storage Unit (similar to Arrangement "D" on page 310).

A Very Small Kitchenette

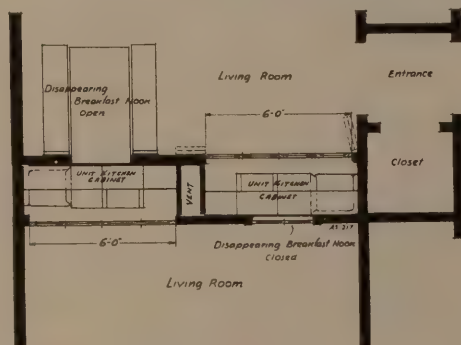


Fig. 8—Where only a very small amount of cooking is done this arrangement has been used successfully. It consists simply of a Cabinet made up of a Range Unit, a Refrigerator and Drainboard Unit, a Sink Unit, a Broom Closet Unit, an Overhead Storage Unit and a Pot and Pan Storage Unit (similar to Arrangement "B" on page 310). This Cabinet is installed in a recess in the wall of the apartment living room, being shielded from view by accordion doors. The Disappearing Breakfast Nook is optional in this case, but is often used.

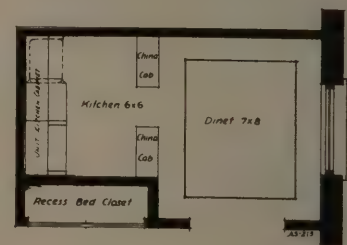


Fig. 7—Here the kitchenette and dining room are in one room, being divided by China Cabinets.

Dressing Room Equipment

Illustrated on this page are the two Built-In Dressing Room fixtures shown in various plans in this book. These two items of equipment enjoy a great popularity in efficiency apartments due to the fact that they are attractive, compact and efficient.

The Wardrobe Cabinet consists of two sections enclosed at the front by sliding doors. The tray section consists of a number of compartments and trays of various sizes for shirts, collars and other personal linens. The wardrobe section is arranged for hanging clothes and will accommodate thirty or more garments. The cabinet comes in five and seven foot lengths and is made to fit perfectly against the back of the bed closet.

The Dressing Table which is used in connection with the Wardrobe Cabinet is provided with a mirror and two drawers and it fastens to the wall.

These two fixtures are standardized stock items and are, therefore, entirely economical.

Saving Space in Kitchens

The kind of kitchenette equipment you install is dependent upon the type of apartments you wish to offer, which means that the kitchenette may graduate in size and completeness from one giving full fledged cooking facilities and suitable for handling and serving three meals a day down to the purely emergency or buffet kitchenette for preparing only light or occasional meals.

Recently there has been developed a line of cabinet units consisting of about forty-eight fixtures of different kinds and dimensions, which permit such a flexibility in arrangement that a great number of combinations can be worked out to provide just the facilities necessary in each case for food preparation and storage. The "Warwick" Kitchen Units, which are illustrated on page 310, have been used, therefore, in the paragraphs that follow to show what can be done to take care of the requirements of (1) full sized kitchenettes (2) small kitchenettes and (3) emergency or "buffet" kitchenettes.

Full Sized Kitchenettes

There are two general methods of handling kitchenettes to provide all the necessary facilities,—illustrated by plans on page 308.

The first method is shown in Figures 1, 2, 3 and 4. This type of a kitchenette contains a regulation range and a sink, with a combination of kitchen units to provide the other fa-



A Built-In Dressing Cabinet and Wardrobe for use in the Dressing Closet

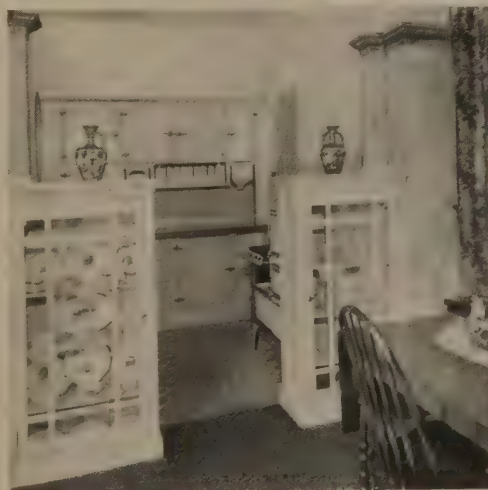


A Built-In Dressing Table, such as used in the dressing closet behind a Door Bed (see plans on pages 304 and 306)

cilities (similar to Arrangements "A," "C" and "E" illustrated on page 310). A great number of these combinations can be worked out to produce cabinets from five feet four inches to seven feet two inches long. Among the units used are several types of storage and work table units, broom closet units, refrigerator units, overhead storage compartment units, spice jar, flour and sugar bin units, and others. The range and the sink may, as shown in the plans, be arranged in various ways to suit the space at hand. The range may be either a small standard one such as generally used in apartment buildings, or you may choose a special space-saving kitchenette range which has an oven above the cooking top and with a storage compartment below, giving a very satisfactory cooking appliance with a floor area only two feet square. Any standard small sink may be used. A built-in ironing board is also very desirable and is found to be of help in renting. The kitchenette is completed by the use of two china cabinets, as illustrated on this page, which are placed at the end of the kitchenette and which act

as a division between it and the dining space. A kitchenette such as above described may be installed with entire satisfaction in a space ranging from 7 by 8 feet to 8 by 10 feet or more, and has been successfully used in a very large number of hotels and furnished apartment buildings. It is substantial and permanent and presents a very attractive appearance.

The second method consists of two cabinets made up of kitchen units which contain all the necessary facilities for food preparation and storage. This is illustrated by Figure 5 on page 308. One of the cabinets is made up of



A view showing how China Cabinets are used to divide the kitchenette and dining room



Arrangement "A"



Arrangement "B"

Illustrated above are two arrangements of the "Warwick" Kitchen Units. Arrangement "A" is made up of a refrigerator unit, a storage and worktable unit, a broom closet unit, an overhead storage unit, and a spice jar unit. Arrangement "B" consists of a range unit, a refrigerator and drainboard unit, a sink unit, an overhead storage unit, a broom closet unit and a pot and pan storage unit

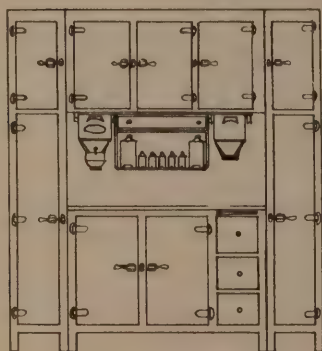
a range unit, a storage and drainboard unit, a sink unit, an overhead storage unit, and a pot and pan storage unit (similar to Arrangement "D" illustrated below). The other cabinet consists of a refrigerator unit, a storage and work table unit, a broom closet unit, an overhead storage unit, and a spice jar unit (similar to Arrangement "A" illustrated above). A number of variations of the arrangement of these cabinets can be worked out, but in any case the floor space required for the kitchenette is reduced by this method to as little as 49 square feet, including the two china cabinets which separate the kitchenette from the dining space. Another advantage of this method of planning a kitchenette is that all necessary facilities are directly

under hand and the housewife is, therefore, saved many steps in the course of her day's work.

Medium Small Kitchenettes

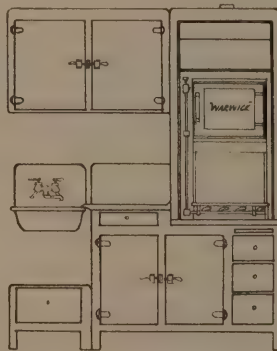
Two examples of such plans are shown in Figures 6 and 7 on page 308. The cabinet used in both cases is an arrangement consisting of a refrigerator and drain board unit, a range unit, a sink unit, an overhead storage unit and a pot and pan storage unit (similar to Arrangement "D" illustrated below). This complete and convenient cabinet is used in Figure 7 on page 308 with two standard china cabinets,—the entire kitchenette requiring a space only six feet square. This may be made larger if desired and a built-in ironing board may then be added. A variation of this installa-

Other Arrangements of "Warwick" Kitchen Units



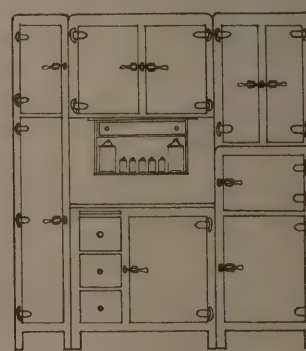
Arrangement "C"

This cabinet consists of a broom closet unit, a refrigerator and worktable unit, an overhead storage unit, a spice jar, flour and sugar bin unit and a high storage unit



Arrangement "D"

The above arrangement is made up of a range unit, a refrigerator or storage and drainboard unit, a sink unit, an overhead storage unit and a pot and pan storage unit



Arrangement "E"

This arrangement consists of a broom closet unit, a storage and worktable unit, two overhead storage units, a spice jar unit and a refrigerator unit

Over 200 different arrangements are possible with "Warwick" Kitchen Units

tion is that shown in Figure 6, the cabinet being used alone in a room which may be reduced as small as four and a half by six feet.



A Disappearing Breakfast Nook

Very Small Kitchenettes

Where only a small amount of cooking is to be done, the space may be even more restricted. As shown in Figure 8 on page 308, this is accomplished by installing a group of units, similar to Arrangement "B," illustrated on page 310, into a recessed compartment, the front of which may be equipped with accordion doors or curtains (preferably the former). This whole arrangement may be installed in as little as 15 square feet, or a space about two and a half feet by six feet, and the experience with such kitchenettes has been entirely favorable.

Dining Rooms and Dinettes

For full sized and medium small kitchenettes, a small dining room space is generally provided as a part of the same room, and this dining space should



Built-in Telephone Niches are worthwhile Space Savers, and are inexpensive. They are installed in the wall between studdings

be from 55 square feet up, the average being 65 to 75 square feet. This space may be reduced by the installation of a built-in breakfast nook of the stationary kind, occupying a small area, or it may be very much further reduced by the use of a folding built-in breakfast nook, such as is shown in Figs. 6 and 8 on page 308.

In extremely small apartments the dining room element is entirely eliminated, the meals being served in the living room.

Miscellaneous Built-in Devices

There is almost no end to the number of built-in devices which may be used, and our space will not permit a comprehensive discussion of them all. A few, however, are important and deserve mention.

The built-in Ironing-Board and Broom Closet is an inexpensive fixture installed in the wall between studdings, generally in the kitchenette, giving a convenient storage space for things which otherwise would be hard to dispose of in a small place. Women's bachelor apartments and dormitories, etc., also make good use of this device, installing it in the room.

The built-in Folding Breakfast Nook is also a very efficient fixture used where no space for a dinette is available. It is built into the wall and is concealed by doors. When the doors are opened the table and benches come down into the room.

The built-in Telephone Niche is a newcomer, and affords a means of disposing of the telephone in a sightly way, at a saving of space. It is installed in the wall between studdings, and contains a compartment for the bell mechanism.

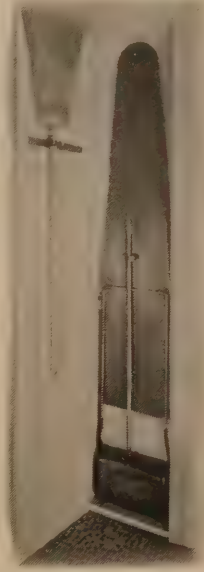
Other valuable products are incinerators, garbage chutes, service doors, etc., many of which are desirable more for utility than space economy.

Construction of Cabinets

It is unfortunately true that in many instances kitchenette cabinets and similar fixtures are extremely poor in quality and prove bad investments. That is not a pleasant thing to say but it is the truth. One reason is that the manufacturers in many cases have taken their standard of construction from the ordinary portable kitchen cabinets sold for home use. The demands upon such cabinets are not the same as in built-in fixtures at all, and the cheap furniture construction used for most of them is much too flimsy for your purposes.

In buying kitchenette cabinets they should be viewed as permanent fixtures which undergo usage of a rather extreme type, and which in the nature of things cannot be permitted to become unsightly or unsanitary. In our judgment wood fixtures of heavy construction are the most satisfactory and economical.

The "White" Door Bed Company (affiliated with the Albert Pick-Barth companies) maintains a service staff of competent engineers who have specialized in Efficiency Planning and who are qualified to suggest plans of floor layout calculated to secure the maximum use of every square foot of rentable floor space. Architects and owners are invited to make full use of this consultation without obligation.



The Built-In Ironing Board has achieved wide popularity. It is installed between studdings and is useful as a closet for brooms, carpet sweepers and the like



A View in the Main Kitchen of the Hotel Stevens, Chicago

Kitchens and Food Service Facilities As Related to the Hotel's Plan

An analysis of many hotel food service departments reveals the fact that a large majority of the serious defects can be traced back to faults and oversights in the early stages of planning. If individual hotel requirements are calculated from a far-sighted survey of conditions and if the plans are methodically developed through a functional analysis such as discussed in earlier chapters, the causes of trouble will be stopped at their source.

Kitchen engineers are ready to assume the responsibility for the satisfactory operation of the kitchens, but cannot do so when they are forced to start with insufficient space, ill-advised location in the building plan, or other handicaps of this nature. Kitchen outfitters are therefore glad to place their engineers at the disposal of the architects at the earliest stages in the planning—a procedure which is equally to the interest of the architect and the owner as insurance against costly alterations in plans or construction.

Food service engineering cannot be carried out by means of fixed mathematical formulae. There is no positive rule that can be used to determine the size of the restaurant facilities for a hotel of given size—in fact, even the layout of a kitchen is not carried out according to a single fixed method. Local conditions, personal preferences and other individual factors will always prevent kitchen engineering from becoming a matter of routine handling.

Many definite general principles, however, have been developed and with the experience of the kitchen engineer, their application to the problems of both preliminary and final planning will produce the most logical economical and efficient results.

While most of the problems that must be handled in the equipping of restaurants are purely matters for the engineer and outfitter to solve, a clear idea about them on the part of the architect and the hotel operator will be of benefit by increasing appreciation of the important matters to consider—thus smoothing the way for cooperation between all who are involved in the work. In this and the following two chapters will therefore be given an outline of the general methods used in planning and equipping kitchens and food service departments by the affiliated PICK-BARTH and VAN organizations.

This discussion includes numerous sets of figures on space requirements, and other data for the general information of architects and hotel and restaurant operators. These statistics will unquestionably prove of definite help if used for the purpose of comparison with plans *but it should be clearly understood that they are intended only for general guidance and it is not expected that they can be arbitrarily applied to any given case. Their application should be carried out with the advice of a*

kitchen engineer, whose experience will enable him to make suitable adjustments to meet the individual conditions.

There are also many plans, both theoretical and actual, prepared by PICK-BARTH-VAN Engineers, the use of which should be made with the same reservation mentioned above. With this in mind the hotel man and his architect can find much of value in the material presented.

The first step in Food Service planning is a decision of policy made by the owner in which both the architect and kitchen engineer can contribute valuable help. This is the policy as to the amount of restaurant capacity needed by the hotel and how it should be divided among dining rooms, lunchrooms, banquet halls, soda parlors or other types. As has been said, there is no definite rule to decide this. The restaurant capacity of a hotel is not in direct proportion to the number of rooms. Some successful hotels have greatly oversized restaurant facilities while others, equally profitable, make very little play for catering business. In both cases the policy no doubt may be wise in view of conditions.

In general, the factors which influence the amount of food service are:

1. The type of hotel—whether transient, residential, resort, bachelor, etc.
2. The class of patronage.
3. Size and characteristics of the community.
4. Possibilities of outside patronage in view of the hotel's location, etc.
5. Competition of other hotels and restaurants.
6. The degree to which the hotel is expected to enter into social and community life.
7. Extent to which conventions, etc., may be expected.
8. Other special influences such as seasonal fluctuations, catering reputation of operators, possibilities of future expansion, probable development of community or district, etc.

Depending upon how shrewdly these influences are analyzed and upon the experience and judgment of the operator, the result will either provide a sound business proposition or one which is unprofitable and will require future reorganization.

In most hotels built in the past this decision was practically a matter of guesswork,—and this applies particularly to hotels built through civic movements and by investors unfamiliar with hotel operation. With competitive conditions as they are today, the promoters and financial backers of new projects will do well to follow a less hazardous course. If every man who is building a hotel could review the experience of others during the first year of their operation and could see how frequently lack of intelligent analysis has caused unnecessary losses, he would not need his kitchen engineers to convince him of the value of spending

Table Showing the Restaurant Seating Capacity in a Number of Representative Hotels of Various Types and Sizes

No. of Rooms	Name of Hotel	Dining Room	Lunch Room or Coffee Shop	Cafeteria	Soda Parlor	Banquet Room	Private Dining Rooms
COMMERCIAL AND METROPOLITAN HOTELS							
80	Blue Bonnet Corvillle, Tex.	125	57		50	225	
87	Graystone Bedford, Ind.	60	44			250	20
109	Dair Coffeeville, Kan.	80	40			300	(3) 50
125	Bathwell Sedalia, Mo.	46	102		40	250	36
152	Morgan Morgantown, W. Va.	108	95		50	500	15 to 35
165	Auditorium Houston, Tex.		60				
167	Monticello Longview, Wash.	200	80			75	40
172	Geo. Vanderbilt Asheville, N. C.	200	100			300	75
174	Chickadee Council Bluffs, Ia.	No. 1-100 No. 2-48	90		26	No. 1-450 No. 2-80	(2) 65
200	Port. Armstrong Rock Island, Ill.	150	125			300	30 to 60
200	Grim Texarkana, Ark.	No. 1-50/ As one No. 2-50/ room with No. 3-50/ seat 200	104		40	No. 1-375-400 No. 2-350	
225	Louis Joliet Joliet, Ill.	184	80				
225	Southern Jackson, Tenn.	250	86				(3) 75
225	King Cotton Greensboro, N. C.	200	85			500	50
240	Bergonia Seattle, Wash.	250	58			50	(3) 60
250	Kethaw Fond du Lac, Wis.	No. 1-200 No. 2-150	100			No. 1-500 No. 2-200	25 to 50
260	Hilton Arlene, Tex.		180			No. 1-350 No. 2-50	
275	Wausau Wausau, Wis.	150	130			250	(2) 65
300	Abraham Lincoln Springfield, Ill.	250		240		No. 1-300 No. 2-185	150
300	Kansas Topeka, Kan.	No. 1-150 No. 2-45 No. 3-40	75			No. 1-400 No. 2-150	No. 1-60 No. 2-40 No. 3-30
300	Auditorium Cleveland, O.	50	90				
450	Duluth Duluth, Minn.	300	225			500	(5) 200-300
600	Hamack Chicago	No. 1-400 No. 2-250	200			No. 1-250 No. 2-150	Several from 10 to 100 seats
750	Roosevelt New Orleans, La.	No. 1-300 No. 2-440	175			(2)	7 rooms
875	Savoy Plaza New York	No. 1-400 No. 2-200				275	
1000	Calsou Cincinnati	1000	518		Soda & tea room-175	No. 1-1500 No. 2-1000 No. 3-250	20
1200	Book-Cadillac Detroit	No. 1-500 No. 2-300 No. 3-250	300		Pantry shop 100	No. 1-1000 No. 2-400	15 rooms- 10-100 each
1200	Benjamin Franklin Philadelphia	No. 1-500 No. 2-400	100			No. 1-1500 No. 2-300	5 rooms- 12-70 each
1600	Park Central New York	No. 1-400 No. 2-500 No. 3-500				5 rooms- 50 to 280 each	
2240	Palmer House Chicago	No. 1-400 No. 2-200 No. 3-400	200		125	No. 1-1400 No. 2-700	11 rooms
3000	Stevens Chicago	No. 1-600 No. 2-500 No. 3-250	157			No. 1-2000 No. 2-550 No. 3-270 No. 4-180	11 rooms

RESIDENTIAL HOTELS

80 Apts. (200 Rooms)	Ponchartraine New Orleans, La.	125					
150 Apts. (300 Rooms)	Seville Apts. Detroit		100				
105 Apts. (300 Rooms)	Pizza Houston, Tex.	150					(3) 125
315	Maryland Chicago	200	100			200	6 rooms
343	Georgian Evanston, Ill.	No. 1-150 No. 2-100				75	
396	Arcady Los Angeles	100	40				
396	Belcrest Detroit, Mich.	62				No. 1-90 No. 2-40	
400	Graemere Chicago	125				No. 1-250 No. 2-175 No. 3-100	(3) 20
600	Leverich Towers Brooklyn, N. Y.	No. 1-300 No. 2-430				1400	(4) 200
678	Webster Hall Pittsburgh, Pa.	400	100			No. 1-250 No. 2-125	3 rooms

RESORT HOTELS

250	Buena Vista Biloxi, Miss.	No. 1-400 No. 2-100	60		60	100	
296	Half Moon Coney Island, N. Y.	No. 1-410 No. 2-255	400			600	(5) up to 40 each
400	Floridan Hotel Tampa, Fla.	150	120			140	150
400	Edgewater Gull Biloxi, Miss.	No. 1-400 No. 2-100			50	400	(2) 75
500	Arlington Hot Springs, Ark.	No. 1-600 No. 2-150 No. 3-100			75	No. 1-1000 No. 2-100	2 rooms



Main Kitchen, Wade Park Manor, Cleveland, Ohio

time on this problem *before* and not *after* the hotel is built. Even in large and prominent hotels it is not an uncommon thing to find costly changes in the restaurant facilities required after a short period of operation solely because of the unwise or careless handling of this problem.

In this connection it will be helpful to examine the analysis, "Restaurant Facilities of a Number of Modern Hotels," shown on page 314. Here we have selected a group of houses which present a reasonably dependable cross section of the industry—hotels ranging in size from 80 to 3000 rooms and including practically all types,—and have tabulated their dining room capacities in such a manner as to show the number of seats provided for each kind of restaurant.

From this table it will be seen that a consistent relation between the number of rooms in the hotel and its restaurant capacity exists only in a very general way. You might say as a generality that a 100 Room Commercial Hotel would normally provide an 80-100 seat Dining Room, a 40-60 seat Lunchroom, a Banquet Hall of about 250 seat capacity, together with some private dining rooms and perhaps a soda fountain either operated by the hotel or contained in sub-rental space. This, however, does not of necessity suit any particular case, and by comparing these figures with any one hotel in the table it can be seen that individual conditions show their influence in every case.

The smaller hotels, of course, run more true to proportion than those of two or three hundred rooms or over, for their locations in small cities

make them subject to fewer special influences than exist in metropolitan centers where neighborhood, local competition, etc., are of greater importance.

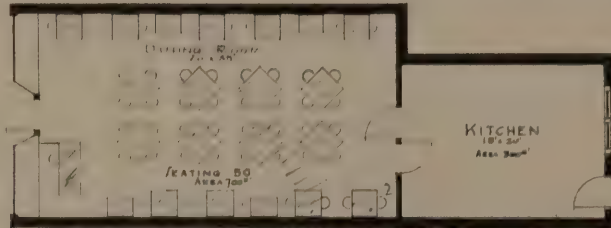
As to the comparison between residential and commercial hotels it may be said that the former not only contain smaller restaurant capacity, but tend to concentrate service in fewer dining rooms. Lunchrooms and coffee shops are less popular here than in commercial hotels for obvious reasons and banquet halls and private dining rooms are frequently omitted. It should be noted that this reduced featuring of food service is not only due to the permanent character of the guests and to the presence in many cases in kitchenette facilities in the apartments, but is also caused by the fact that residential hotels are generally located where public patronage, especially for low priced meal service, is less possible.

Resort hotels present a still different precedent. Usually the food service will be on a fairly large scale, although concentrated in high class dining rooms. Comparatively few give much space to coffee shops or lunchrooms, but the banquet hall and soda parlor are in good favor.

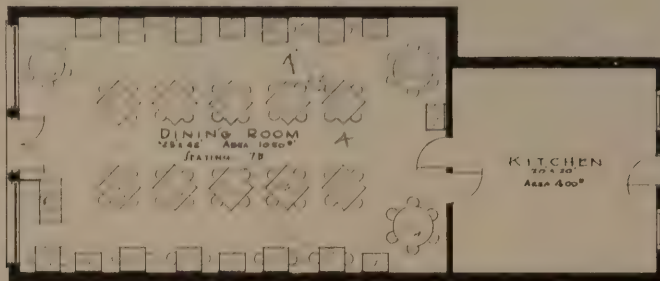
Probably the outstanding fact disclosed by this restaurant analysis is the overwhelming preference shown for lunchrooms as compared with cafeterias. After the great amount of discussion which has been devoted to cafeterias and their evident popularity in certain localities, this analysis may prove a distinct surprise to many. The fact remains that the new hotel which elects to employ cafeteria service for its low price dining room is a rare exception

Space Requirements for the Kitchens and Dining Rooms of Waiter Service Restaurants

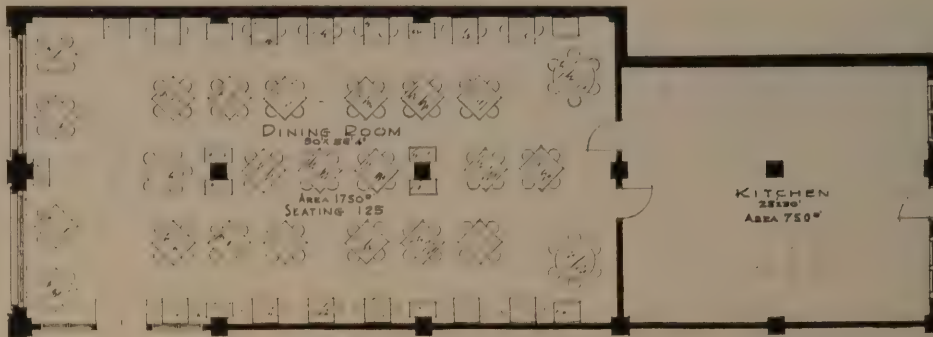
Excluding Store Room Space, Help's Wash Rooms and Other Auxiliary Facilities.



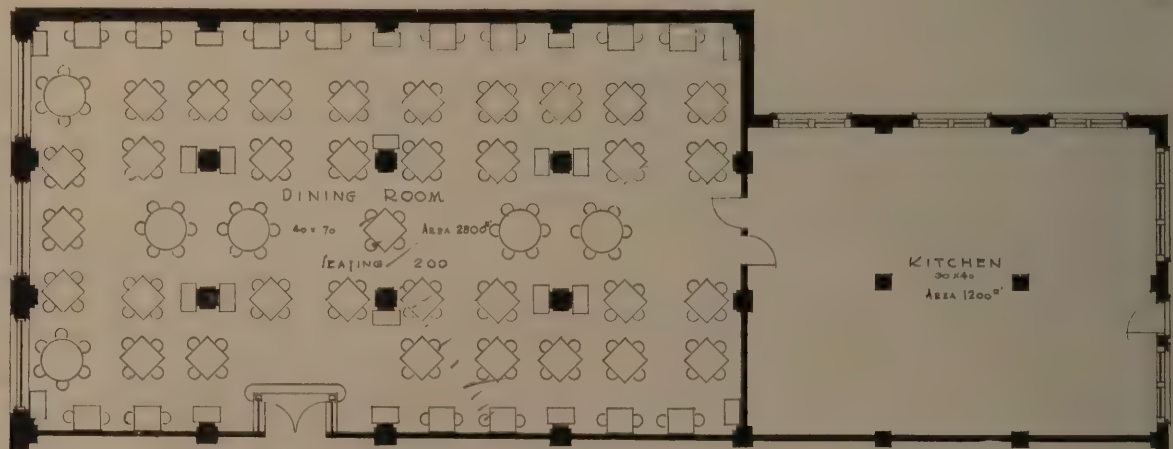
Seating Capacity, 50. Size of dining room, 20 by 35 ft. or an area of 700 sq. ft. Size of kitchen, 10 by 20 ft. or an area of 200 sq. ft.



Seating Capacity, 75. Size of dining room, 25 by 42 ft. or an area of 1,050 sq. ft. Size of kitchen, 20 by 20 ft. or an area of 400 sq. ft.



Seating Capacity, 125. Size of dining room, 30 by 58 1/2 ft. or an area of 1,750 sq. ft. Size of kitchen, 25 by 30 ft. or an area of 750 sq. ft.



Seating Capacity, 200. Size of dining room, 40 by 70 ft. or an area of 2,800 sq. ft. Size of kitchen, 30 by 40 ft. or an area of 1,200 sq. ft.

WE show here four plans to show the approximate minimum space required for convenient, efficient and economical operation. The kitchen areas given represent a small and compact kitchen without provision for elaborate sub-departments such as a bake shop, etc., and this kitchen area wherever possible should be increased 25-30% above the space shown. The kitchen space should be as nearly rectangular in shape as possible,—not too long and narrow, and free as possible from irregularities. If the space must be of narrow or irregular shape, a larger area will be required. While the areas given here are considered a minimum, even smaller space is sometimes used in highly congested districts, but only at the expense of efficiency. In addition to the area required for the kitchen proper, additional space will be needed for storage, help's wash rooms, etc., but these may be in the basement if possible.

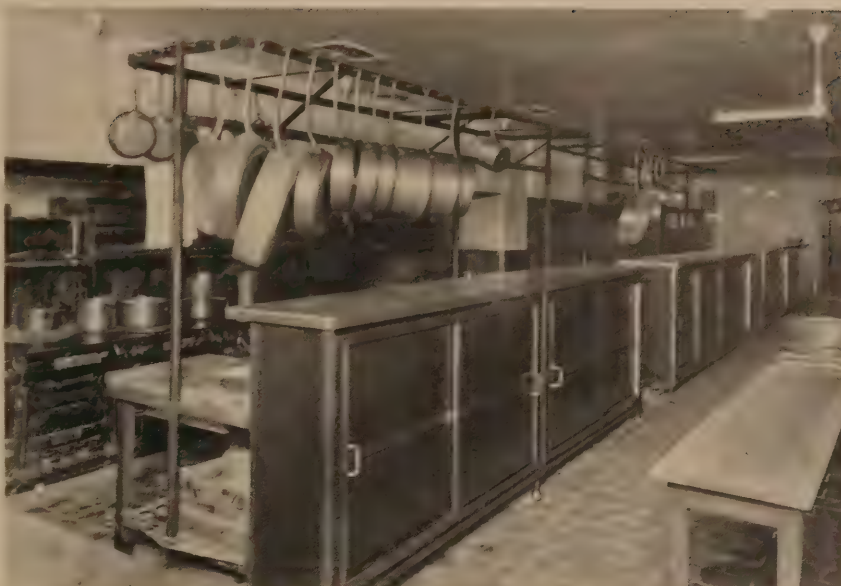
to the rule. One reason for this may be the extensive improvements in lunchroom equipment developed during the past few years. The main reason, however, is that lunchrooms have been found more profitable for hotel operation. (In this connection it will be interesting to study the figures in the comparative tables on page 327.)

Space Requirements

Having decided upon the restaurant facilities for the individual hotel, the operator has now enabled his architect to proceed with the first step in planning, which is the allotment of space. In accordance with the idea of functional plan analysis discussed in earlier chapters, this involves: first, the provision of the necessary amount of space; and, second, its location in the building plan.

The amount of space required for the dining room itself is not a complicated matter to determine, as it may be calculated quite satisfactorily on the basis of number of square feet per seat. For waiter-service dining rooms a safe figure for this purpose is 14 square feet per seat. As may be seen from the analysis of various hotel dining rooms on page 325, this figure is not entirely rigid and may vary from $11\frac{1}{2}$ to 15 or 16 sq. ft.

The space required by the kitchen for a restaurant of a given size is a far less definite matter, however, and here is where faulty planning is most prevalent and most costly. *Seventy-five percent of the present hotel kitchen space is too small.* An enormous saving in labor wastage, loss of efficiency and loss of patronage could be effected by giving suitable consideration to this one phase of planning.



Main Kitchen, Hotel Manger, New York

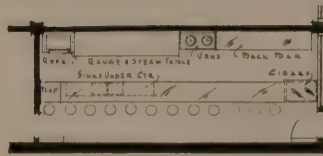
The universal temptation is to make seating capacity larger by cutting down the kitchen area—with the erroneous idea that by so doing the actual capacity in meals per hour is thereby increased. As a matter of fact, it is the kitchen and not the dining room which decides the capacity for service. It is far better to have 150 seats quickly and efficiently served than to attempt the service of 200 seats with an undersized kitchen. Not only is the latter bad planning (because the kitchen forms a "bottle neck" restricting production) but it is extremely poor policy because of its effect upon the patrons, who soon learn to avoid that restaurant which causes them to waste an unnecessary time waiting for food to be served. Entirely aside from the matter of volume of output, cramped kitchens have an unavoidable effect upon the quality of the cooking. It is not human to expect cooks to turn out the same character of food under high pressure and in crowded quarters that they are capable of producing with normally favorable working conditions.

Before going into general figures on the relative space requirements of kitchens and dining rooms, it should be understood that when speaking of the kitchen, the actual service and preparation kitchen is meant. Except where so stated this does not include the store room space, help's toilets, and locker rooms, nor other purely auxiliary departments which may or may not be located as a part of the same general group. Understand, too, that there are many different ways a kitchen may be organized and which have a direct bearing upon the space needed. Thus, one kitchen may be intended for a very limited menu consisting



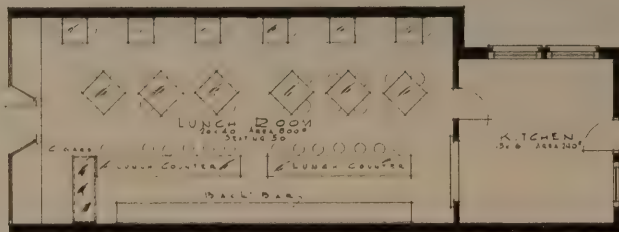
Main Kitchen, Hotel Manger, New York

Space Requirements of Lunch Rooms and Their Kitchens

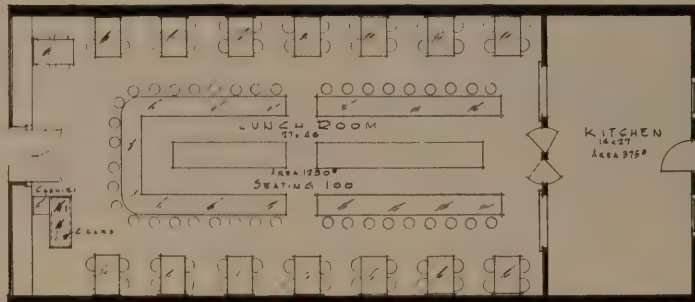


LUNCH ROOM
11x27 Seating 12
No Kitchen

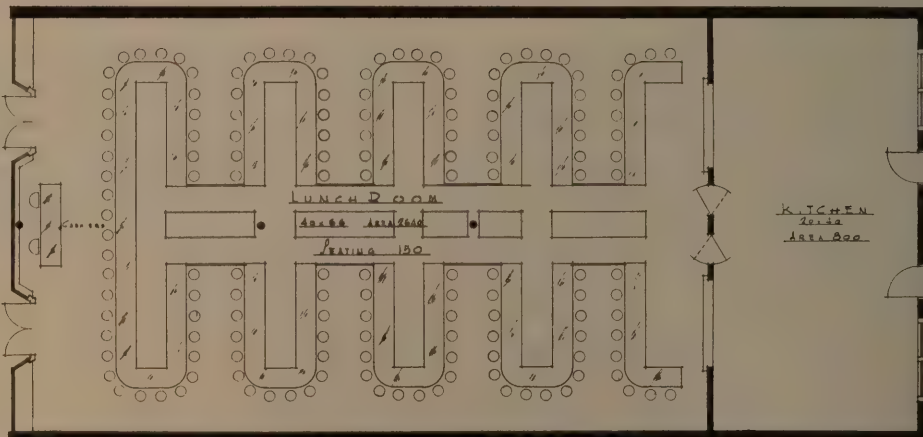
Seating Capacity, 12. Size of room, 11 by 27 ft. or an area of 297 sq. ft. No kitchen.



Seating Capacity, 50. Size of lunch room, 20 by 40 ft. or an area of 800 sq. ft. Size of kitchen, 15 by 16 ft. or an area of 240 sq. ft.



Seating Capacity, 100. Size of lunch room, 27 by 46 ft. or an area of 1,242 sq. ft. Size of kitchen, 14 by 27 ft. or an area of 378 sq. ft.

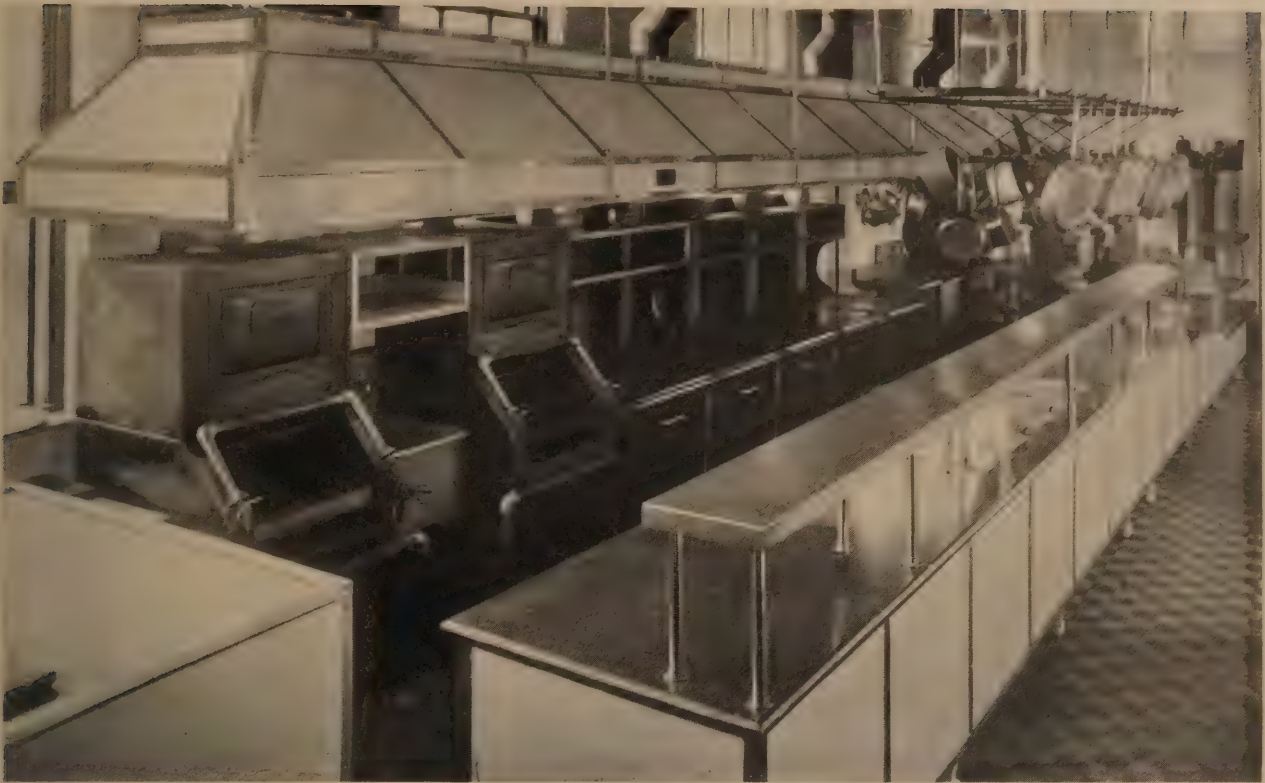


Seating Capacity, 150. Size of lunch room, 40 by 66 ft. or an area of 2,640 sq. ft. Size of kitchen, 20 by 40 ft. or an area of 800 sq. ft.

DUE to the fact that many of the service facilities are contained in the lunch room proper, its kitchen is proportionately smaller than for a regular waiter service restaurant. The space diagrams here are based upon what is thought to be about the minimum workable area and although special conditions or very limited menus sometimes cause the kitchen to be further reduced, such reduction is a rather dangerous thing to attempt. Better operating conditions, especially in the kitchen are promoted by increasing the space allotment shown here, and if the room shape is irregular or very narrow this will be necessary.

In the tiny lunch room seating only 12 people, there is no kitchen, and all food is prepared on the back counter equipment. Such an arrangement usually requires a basement space for dishwashing, storage, etc. In fact many lunch-rooms have the regular kitchen in the basement, connected with a dumb waiter.

Note: These plans do not include storage space, help's wash-rooms, etc., which may be located separately.



Main Kitchen, Hotel Mayo, Tulsa, Okla.

principally of *table d'hôte* service, while another may base its design upon a *la carte* service for a very large variety of dishes. Both may serve the same number of meals per hour, but the first will naturally be able to operate in smaller space. Likewise, one kitchen may require much greater space than another because it must provide for facilities such as bake shop, pastry department, candy maker's room, ice cream maker's room and so on.

With these facts borne in mind it is safe to assume as follows: for a waiter service dining room, the kitchen should have from $33\frac{1}{3}\%$ to 50% (preferably the latter) as much area as the dining room proper to provide good cooking, good service and efficient operation. Ideal examples of such space allotment are shown by the four model plans

on page 316 in which the kitchens are from 40% to 43% as large as their respective dining rooms.

One might easily assume that for very large dining rooms the kitchens would be proportionately smaller. If anything, the reverse is the case, because in larger kitchens the menu is almost always much more extensive, as is also the amount of space devoted to bakery, ice cream making, storage and other sub-departments. As a matter of fact, it is usually true that large hotels which make a feature of their catering find it necessary to provide a far larger relative kitchen area than any of the figures given above. For instance, the Palmer House in Chicago has 40,200 sq. ft. of kitchen area (including storage, etc.) as compared with 43,842 sq. ft. occupied by their dining rooms.



Hotel Francis Marion, Charleston, S. C.



Hotel Barlum, Detroit, Mich.

As to shape, the kitchen space should be rectangular if possible and it is best not to have it over twice as long as it is wide. If very long and narrow, or of irregular or cut-up shape it will be costlier to equip, more difficult to operate, and will require more area (sometimes as much as 25 to 30% more).

The space required for lunchrooms must be based upon a different unit area per seat and varies according to whether or not table service is also to be provided. The model plans on page 318 give a clear idea of this and show the reasons for the differences. Thus the 150 seat model lunchroom with counter service requires about $17\frac{2}{3}$ sq. ft. per seat because of the room needed for fixtures and service space, while the 100 seat plan is worked out with a lower area per seat (12.4 sq. ft.) due to the large number of closely packed small tables. The figures showing areas per seat for actual lunchrooms on page 325 further illustrate the variation.

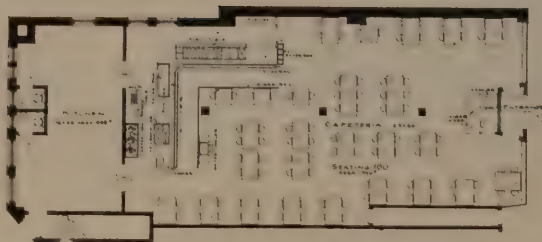
In figuring on space for lunchrooms, therefore, it is best to get down to the basis of a working plan as soon as possible, but for general preliminary purposes we suggest a figure of 16 sq. ft. per seat for counter and table service and 18 sq. ft. per stool for counter service only.

Kitchen space for lunchrooms should be figured on the same basis as for regular dining rooms, averaging one-third to one-half the dining area.

For cafeterias, the general space allotment is about 15 sq. ft. per seat, with some variation depending partly upon arrangement and partly on whether single or double counter service is used. Cafeteria operation reaches its maximum efficiency when there is a seating capacity of 200 or more. Smaller cafeterias are often used, but cannot hope to get the full advantages of the self-service principle. If there are over 300 seats, double counter service will be needed. The kitchen area needed for the cafeteria is the same in proportion as for other dining rooms.

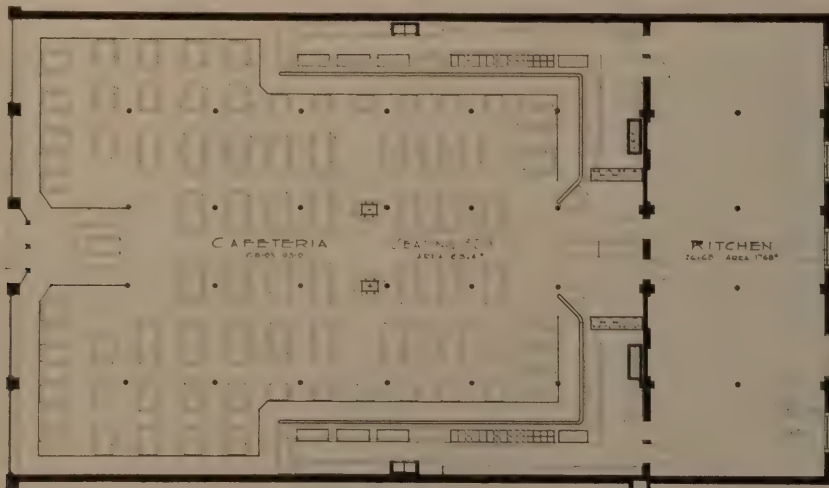
The seating capacity of banquet halls differs from that in ordinary dining rooms by reason of the use of a different kind of table arrangement. The figures given on page 325 are quite representative, ranging from seven to ten square feet per person. A safe figure for estimating is 10 sq. ft. per seat. Banquet service kitchens present a special problem as they may range from a small service pantry operating in connection with the main kitchen to a full fledged separate kitchen where food is prepared as

Space Requirements of Cafeterias and Their Kitchens

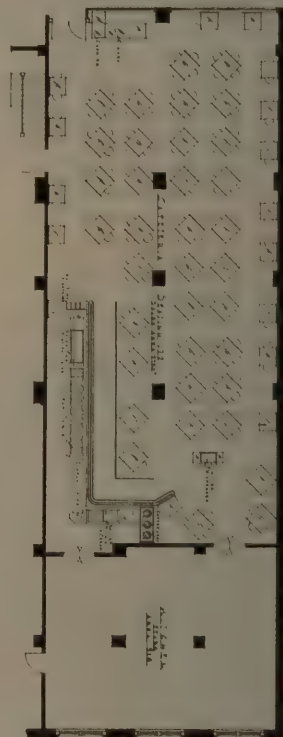


Seating Capacity, 100. Size of cafeteria 29 ft. by 60 ft. or an area of 1,740 sq. ft. Size of kitchen, 16 ft. by 28 ft. or an area of 448 sq. ft.

These three ideal plans give the minimum space allotments for Cafeterias on the same basis as the plans on pages 316 and 318, and it will be interesting to compare them with the actual areas tabulated on pages 325 and 327. Wherever possible the space, especially for the kitchen, should be larger than that given here. No provision is included in the kitchen space in these plans for storage rooms, help's locker rooms, toilets, etc.



Seating Capacity, 320. Size of cafeteria 63 ft. by 93 ft. or an area of 6,324 sq. ft. Size of kitchen, 26 ft. by 68 ft. or an area of 1,768 sq. ft.



Seating Capacity, 172. Size of cafeteria 34 ft. by 80 ft. or an area of 2,720 sq. ft. Size of kitchen, 27 ft. by 34 ft. or an area of 918 sq. ft.



Main Kitchen, Ritz Towers, New York

well as served. Which is best for any particular hotel will depend upon the location of the banquet hall with relation to the main kitchen, the amount of banquet service expected and, to some degree, upon individual preferences. If banquets are to be much of a feature of the hotel's catering, it is generally well to have a good sized service kitchen although much of the food preparation and cooking may be done in the main kitchen. Such a service kitchen requires considerable space (for reasons explained in the next chapter) and the usual ratio of $33\frac{1}{3}$ to 50% as compared to dining area should be adhered to. The material reduction of this space, or the serving of banquets directly from the main kitchen, should be decided upon only as approved by a kitchen engineer.

Soda fountains and soda-lunch rooms are not uniform enough in their facilities to permit much generalized discussion of space needs, etc. This information can be gained from the plans and data shown in the next chapter (page 397).

Help's Dining Rooms

In a hotel of medium or large size it is necessary to provide a Help's Dining Room. For this purpose cafeteria service is most satisfactory. There generally should also be a special kitchen for help's cooking so that food may be kept separate from that in the main kitchen. The space for these purposes may be estimated on about the same basis as for a regular cafeteria, although it may be slightly smaller than normal because of the relatively simple menu which permits the use of a shorter service counter. This help's dining room is usually located

near the main kitchens and should open into service corridors. Some large hotels catering to a wealthy patronage also find it wise to install a second dining room of this class for guests' maids and chauffeurs, but this is a comparatively rare occurrence.

There are many cases where more than one dining room may be directly served from a single kitchen and whenever it is possible this should be arranged as there is a definite advantage in so doing. Whether this is feasible will not appear definitely until the actual plan is under way and at such a time the kitchen engineer can assist in determining whether there is any space economy likely to result. In any case the space saved will not be very great and the best plan is to go on the assumption that the regular proportion to the total dining area should be preserved.



Hotel Siwanoy, Mt. Vernon, N. Y.

It is a cardinal principle to locate the kitchen directly adjoining the dining room it serves. Many times this is violated because of the desire to utilize every possible spare inch of sub-rental space. The most serious consequences occur when this leads to the location of the kitchen on the floor below or above the dining room. Trying to serve food upstairs or downstairs is operating under a very serious handicap, as many have found to their sorrow. There may be cases where land values are so high that this course is justified, but in many other instances the loss is as great as the gain. Where the kitchen must be on a different floor, the use of ramps and conveyors will help to make the best of the situation.

Where available space for the kitchen is limited on the dining room floor, it may be found that the store rooms, storage refrigerators, food preparation rooms, bake shop and, at times, the dishwashing department can be separated from the main service kitchen and placed on another floor. This is seldom done except in very large hotels and even then is only feasible if there is excellent provision for transportation of supplies, food, etc., between the separate divisions and the main kitchen. In any case such a scheme should be worked out as an individual problem with a competent engineer.

Both the kitchen and store rooms must, of course, have quick and direct access to the service entrance of the hotel, and the service corridor connecting them should be as short as possible and wide enough to permit the passage of large barrels, crates, etc., as well as the equipment which must go into the kitchen. In the same way, the kitchen and storage

must be immediately beside the service elevators or stairway, for the convenience of room service and to make possible easy transporting of food and supplies from the main kitchen and storage to secondary kitchens, banquet halls and private dining rooms.

If there are several kitchens in the hotel, each needs to have adequate service corridors and other means of communication and transportation to link it with the store rooms and main kitchen. This is especially important if the separate kitchens are not expected to do all of their own cooking and preparation work.

Somewhere convenient to the kitchen, and connected by service elevators or passages there should be help's toilets, and locker rooms, and if there is to be a separate help's dining room, this is often made a part of the same group.

In addition to the various departments of the kitchen itself, there are several allied facilities which must be provided and need to be located where they can fit properly in their place in the scheme of operation. Among the most important of these are the garbage disposal facilities and the refrigerating machinery. Their location will have to be worked out as individual problems with the help of the kitchen engineer.

It has generally proved wise to arrange the lunch room, coffee shop, cafeteria or soda parlor with a separate direct entrance to the street in order to promote public patronage by making the restaurant more quickly accessible to passers-by. Where the lunchroom is located in the basement it is worth



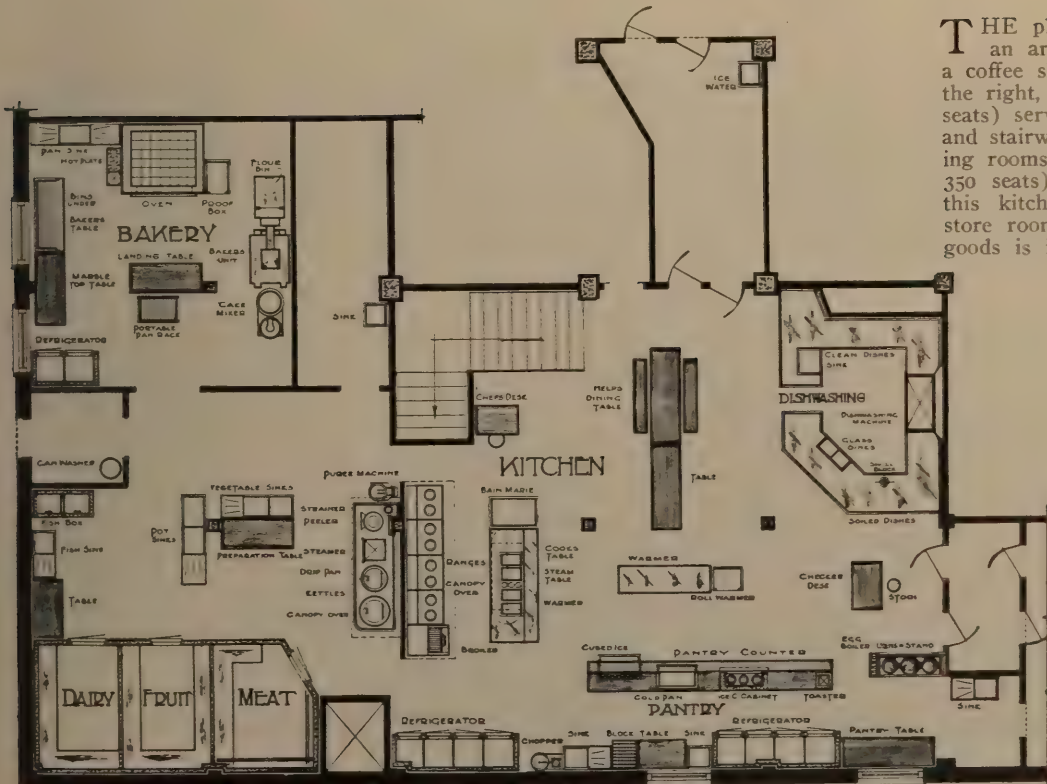
Main Kitchen, Hotel Lincoln, New York



Kitchen of the Hotel Ft. Armstrong

Rock Island, Ill.

Chas. Wheeler Nicol, Architect



THE plan of this kitchen shows an arrangement where we have a coffee shop (125 seats) service to the right, a main dining room (150 seats) service at the top of the plan and stairways leading to private dining rooms and banquet rooms (300-350 seats) on the floor above. In this kitchen plan, while the main store room for dry goods and can goods is in the basement, the large storage refrigerators are included in the kitchen space. The bakery is in a separate room and detached from the service of the kitchen. The equipment used is of very fine quality.

The Hotel Ft. Armstrong Kitchen was completely planned, equipped and installed by the Engineering staff of the PICK-BARTH Companies.



Main Kitchen, Hotel Park Central, New York



Two Views of the Roof Kitchen, Hotel Park Central, New York



Two Views of the Grill Kitchen, Hotel Park Central, New York

while to consider providing a special stairway entrance to the street. There can be no question as to the effectiveness of a public entrance in bringing in outside business for quick lunch restaurants.

Even with some of the leading architects of the country the consideration of the location and extent of kitchen space has been a matter of small importance. Sometimes whatever space has not been utilized for other purposes thought more important, is turned over for the kitchen. The essential consideration for plumbing, ventilation, proper and adequate flues, suitable steam, water and gas lines are often entirely omitted. Many times a building has progressed too far, and too many conditions have arisen that would be expensive to change, before the problem is definitely submitted to the kitchen engineer. The result is that makeshifts are often necessitated which do not give the purchaser the fullest value for his investment.

The best insurance against such trouble is an experienced kitchen equipment engineer. Although he does not pretend to be an actual engineer in the sense that he could assume the responsibilities of a mechanical, civil, or electrical engineer, yet the kitchen equipment specialist must know something of every associated profession and trade in order that he may properly perform his work.

His duties begin with cooperation with owner and architect and carry through to the final installation of the equipment in the kitchen ready for operation. He will prepare without obligation, tentative plans showing the size and arrangement of equipment advisable for any size or type of place. When

these plans are accepted he will indicate the necessary plumbing, steam, water, waste, gas and electrical connections required to operate this equipment, and their proper locations. He also will consult with the ventilating engineer as to the best manner in which his work can be carried out, and, in fact, act in an advisory capacity both with the architect and the builder for an indefinite period of time. The one stipulation is that other things being equal he is entitled to a very careful consideration when the order is being placed.

In view of the vital importance of the part the equipment engineer plays, obviously the securing of really competent service is of the utmost importance. You are staking so much that the greatest care should be used to see that your confidence is well placed.

The PICK-BARTH-VAN Staff of Kitchen Engineers are, we believe, justly recognized as the most competent group of their kind in the country. Naturally their experience is wider, for through their combined efforts they have equipped a great many more kitchens than any other organization. We take care in selecting the highest caliber men for this work and generally develop them in our own organization as we find that few men not so trained can meet the requirements of our careful methods of operation. The majority of the architects prominent in hotel and similar work have found their assistance of value and the outstanding character of the kitchens they have planned is the best testimony as to their competence.

Table Showing Area Per Seat in Various Restaurants

	Seating Capacity	Dining Room Area in Sq. Ft.	Area Per Seat in Sq. Ft.
DINING ROOMS			
Hotel Fort Armstrong, Rock Island, Ill.....	144	2020	14.
Hotel Coronado, St. Louis, Mo.....	184	2142	11.5
Hotel Pfister, Milwaukee, Wis.....	258	3192	12.
Hotel Vanderbilt, New York.....	350	5490	15.7
Palmer House, Chicago, Ill.....	400	5800	14.5
Hotel Stevens, Chicago (Colchester Room).....	485	5888	12.
Hotel Stevens, Chicago (Main Dining Room).....	600	9522	15.87
Hotel McAlpin, New York.....	600	7998	13.3
Hotel Pennsylvania, New York.....	650	8132	12.5
BANQUET ROOMS			
Hotel McAlpin, New York.....	180	1848	10.2
Hotel Ft. Armstrong, Rock Island, Ill.....	300	2400	8.
Hotel Ritz-Carlton, New York.....	375	3800	10.1
Palmer House, Chicago (Red Lacquer Room).....	700	6400	9.14
Hotel Pennsylvania, New York.....	1200	10366	8.6
Palmer House, Chicago, Ill. (Main Ballroom).....	1400	11920	8.5
Hotel Stevens, Chicago, Ill.....	2000	14495	7.25
LUNCH ROOMS			
Webster Hall, Pittsburgh, Pa.....	98	1824	18.5
Hotel Pfister, Milwaukee, Wis.....	104	1620	15.5
Bismarck Hotel, Chicago, Ill.....	200	4400	22.
Palmer House, Chicago, Ill.....	200	5600	28.
Hotel Sherman, Chicago, Ill.....	312	7200	23.
CAFETERIAS			
Hotel Tulsa, Tulsa, Okla.....	152	2390	15.75
Hotel Lamar, Houston, Texas.....	360	6664	18.5
Hotel Savarine, Detroit, Mich.....	160	2465	15.4

Architectural and Engineering Problems Involved in Hotel Food Service Planning

The Engineering staff of the PICK-BARTH-VAN Companies collaborates with Architects and their clients in working out these problems.

Food Service Policy

How much will Food Service be a feature of Hotel? Determine number, sizes and types of Dining Rooms used for size of Hotel.

How much outside restaurant patronage is expected? How much are banquets and conventions expected?

Food Service Space Requirements

Provide area needed for dining rooms, based on number of seats and type of service.

Provide kitchen area based on size of dining rooms, variety of menu, extent of preparation, etc.

Extra space needed for storage of food, china, etc.

Extra space needed for Help's Toilets, Locker Rooms, Dining Room, etc.

Extra space needed if bake shop, ice cream room, etc., are to be included in kitchen.

Extra space needed if kitchen is very narrow or irregular in shape.

Location in the Building Plan

Locate kitchen immediately adjacent to dining rooms; never on separate floor unless impossible otherwise.

Locate kitchen and storerooms directly accessible to service entrance and elevators, with wide service hallways, elevators, etc.

Locate kitchens to detract as little as possible from valuable revenue producing space.

Have as few separate kitchens as possible; centralize cooking.

If storerooms or preparation kitchens are separate, provide easy access to main kitchen.

Provide kitchen space as nearly square as possible.

Locate help's locker rooms, wash room, etc., convenient to kitchen.

Locate service entrance far as possible from public hotel entrance.

Locate lunchroom, cafeteria or soda parlor to permit separate entrance to street.

Structural Requirements of Building

Provide proper type of kitchen flooring, wall and ceiling finish, tiling, etc.

Location of special walls and partitions.

Size of receiving doors, hallways, elevators, etc.

Provide proper ceiling height for kitchen.

Heat insulation and floor reinforcement.

Size and location of flues.

Kitchen Planning and Engineering

Space allotment for departments within the kitchen. Kitchen layout must provide for smooth handling of waiter traffic.

Arrangement of each kitchen division for efficient operation.

Organize kitchen to give progressive movement of food, etc., from entrance or storage through kitchen to line of service.

Organize kitchen to permit easy supervision, food control and checking.

Locate preparation division close to respective service departments.

Segregate noisy or unsightly departments away from main line of service.

Provide efficient storage facilities—refrigerators, bins, stockrooms, etc.

Provide ample service refrigerators for all departments.

Locate room service department convenient to service elevators.

Determine best available fuel.

Provide for keeping kitchens clean and sanitary.

Provide for garbage storage and disposal.

Proper size and location of flues.

Location in plans of all necessary plumbing, piping, wiring, steamfitting and other connections.

Preparation of complete specifications covering all necessary equipment, utensils, china, glass, silver, linens and accessories.

Auxiliary Requirements of Kitchen

Provision of amount of steam needed at proper pressure.

Volume of hot water needed. Special boiler?

Electric power required—amount voltage, period of load, etc.

Gas requirement—volume, pressure, size of piping.

Plumbing—size of pipes, provision of floor drains, grease traps, etc.

Ventilation—natural or artificial. Provide necessary exhaust hoods for ranges, etc.

Provision of garbage incinerator and location of stack.

Lighting—natural and artificial.

Provision of conveyors, subveyors, dumb waiters, etc.

Special Types of Restaurants

Lunchrooms

Counter only, or counter and tables?

Arrange to give greatest space utilization and quickest service.

Served from main kitchen or separate kitchen?

Provide access to preparation kitchen and storage for food and supplies.

Cafeterias

Provide counter to give adequate capacity for number of seats.

Arrange counter for profitable merchandising of food.

Served from main kitchen or separate kitchen?

Access to preparation kitchen and storage for food and supplies.

Banquet Halls

If served from main kitchen, provide adequate serving pantry, dish disposal, etc., unless immediately adjacent to main kitchen.

Separate banquet kitchen requires special equipment and arrangement.

Access to service elevators, preparation kitchen and storage for transporting food and supplies.

Private Dining Rooms

Accessible to service elevators or hallways leading to kitchen.

Soda Parlor

Type, size and arrangement of fountain.

Provision for light lunch service.

Help's Dining Room

Cafeteria service preferred.

Accessible to service corridors.

Special kitchen required.

Selection of Equipment

Use standardized equipment; avoid special designs wherever possible.

Design, character and construction of equipment have big effect on operating costs, maintenance, depreciation and sanitation.

Severity of service demands very heavy duty equipment.

Labor saving devices should be freely used.

Analyze specifications carefully in purchasing to assure logical comparison of values.

A Few Comparisons Between Restaurants, Lunch Rooms and Cafeterias

THE figures given below are designed to afford certain comparisons under the same general conditions. They are *not* intended to represent average figures or ideal conditions nor are they expected to cover extreme conditions of any kind. In order to obtain a complete comparison of this kind, several other sets of figures would have to be studied, among the most important being: comparative equipment cost, comparative payroll, food costs, number of hours oper-

ated daily and so on—all of which are too much a matter of individual cases to attempt to analyze here. It should be understood that Lunchrooms cost more to equip than Waiter Service Restaurants and that Cafeteria equipment costs are in between these two. The same is true of the payroll as a general statement, although the differences are not as great. Where capacities in meals per hour are given, they are based upon full meals, not small lunches or breakfasts.

Waiter Service Restaurants

Number of Seats	Space Required			Capacity in Meals Per Hour	Meals Per Seat Per Hour	Approx. Average Check*
	Dining Room	Kitchen	Total			
50	700 Sq. ft.	300 Sq. ft.	1000 Sq. ft.	75	1 to 1½	45c (70c)
75	1050 Sq. ft.	400 Sq. ft.	1450 Sq. ft.	112	1 to 1½	50c (75c)
125	1750 Sq. ft.	750 Sq. ft.	2500 Sq. ft.	187	1 to 1½	55c (80c)
200	2800 Sq. ft.	1200 Sq. ft.	4000 Sq. ft.	300	1 to 1½	60-65c (85c)

Counter Service Lunch Rooms

Number of Seats	Space Required			Capacity in Meals Per Hour	Meals Per Seat Per Hour	Approx. Average Check*
	Dining Room	Kitchen	Total			
50	800 Sq. ft.	240 Sq. ft.	1040 Sq. ft.	175	3½	43-45c (60c)
100	1250 Sq. ft.	375 Sq. ft.	1625 Sq. ft.	350	3½	45-50c (60c)
150	2640 Sq. ft.	800 Sq. ft.	3440 Sq. ft.	525	3½	53c (65c)

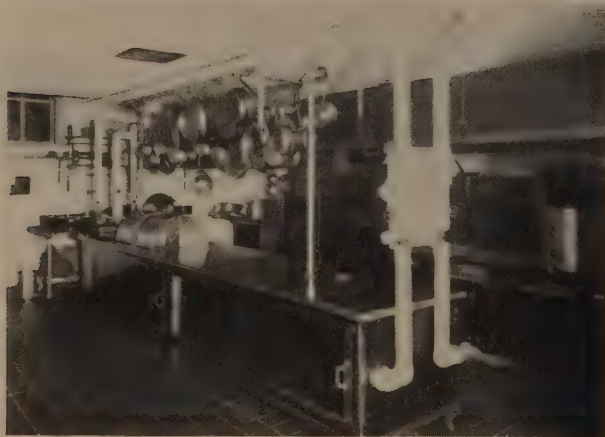
Cafeteria Service Restaurants

Number of Seats	Space Required			Capacity in Meals Per Hour	Meals Per Seat Per Hour	Approx. Average Check*
	Dining Room	Kitchen	Total			
50	700 Sq. ft.	250 Sq. ft.	950 Sq. ft.	150	2¾	37-40c (65c)
75	1200 Sq. ft.	450 Sq. ft.	1650 Sq. ft.	225	2¾	39-41c (65c)
125	1700 Sq. ft.	750 Sq. ft.	2450 Sq. ft.	375	2¾	41-43c (70c)
200	3100 Sq. ft.	1400 Sq. ft.	4500 Sq. ft.	600	2¾	43c (75c)

* Two sets of figures are given here, the ones in parentheses representing the average check in a few highly congested metropolitan centers.



Main Kitchen, Hotel Savoy-Plaza, New York



Range and Broiler Division



Vegetable Preparation Section



Employees' Cafeteria



A View in the Main Kitchen of the Hotel Stevens, Chicago



Range and Broiler Division, Hotel Stevens, Chicago



General View of Main Kitchen, Hotel Stevens, Chicago



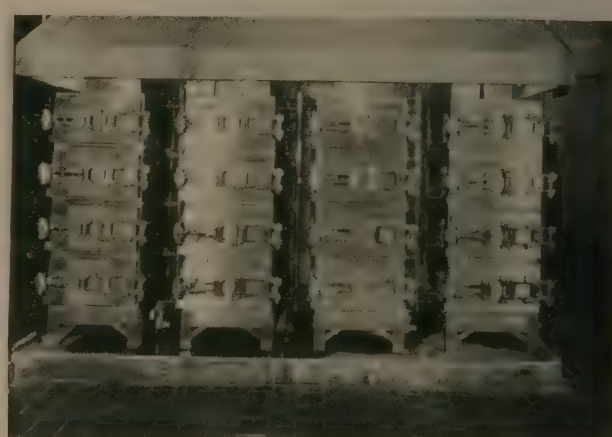
Hotel Stevens Breakfast Pantry



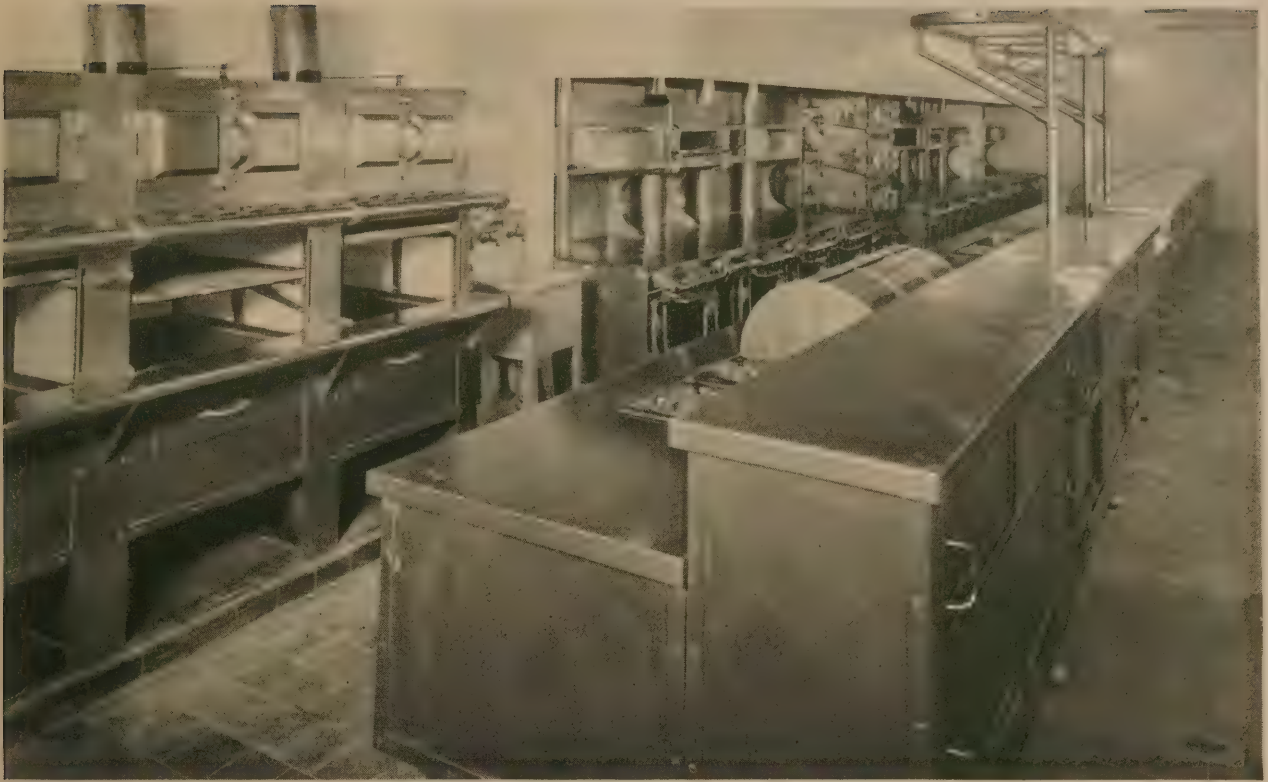
Hotel Stevens Vegetable Room



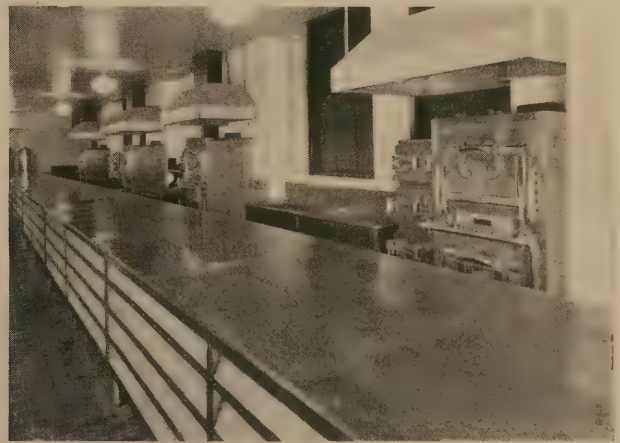
Hotel Stevens Jacketed Kettles



Hotel Stevens Vegetable Steamers



Colchester Room Kitchen, Hotel Stevens, Chicago



Two Views of the Hotel Stevens Banquet Service Kitchen



Hotel Stevens Coffee Shop Kitchen



Hotel Stevens Coffee Makers



Main Kitchen, Leverich Towers, Brooklyn, N. Y.



Main Kitchen, Hotel Roosevelt, New Orleans, La.



Main Kitchen, Hotel Book Cadillac, Detroit, Mich.



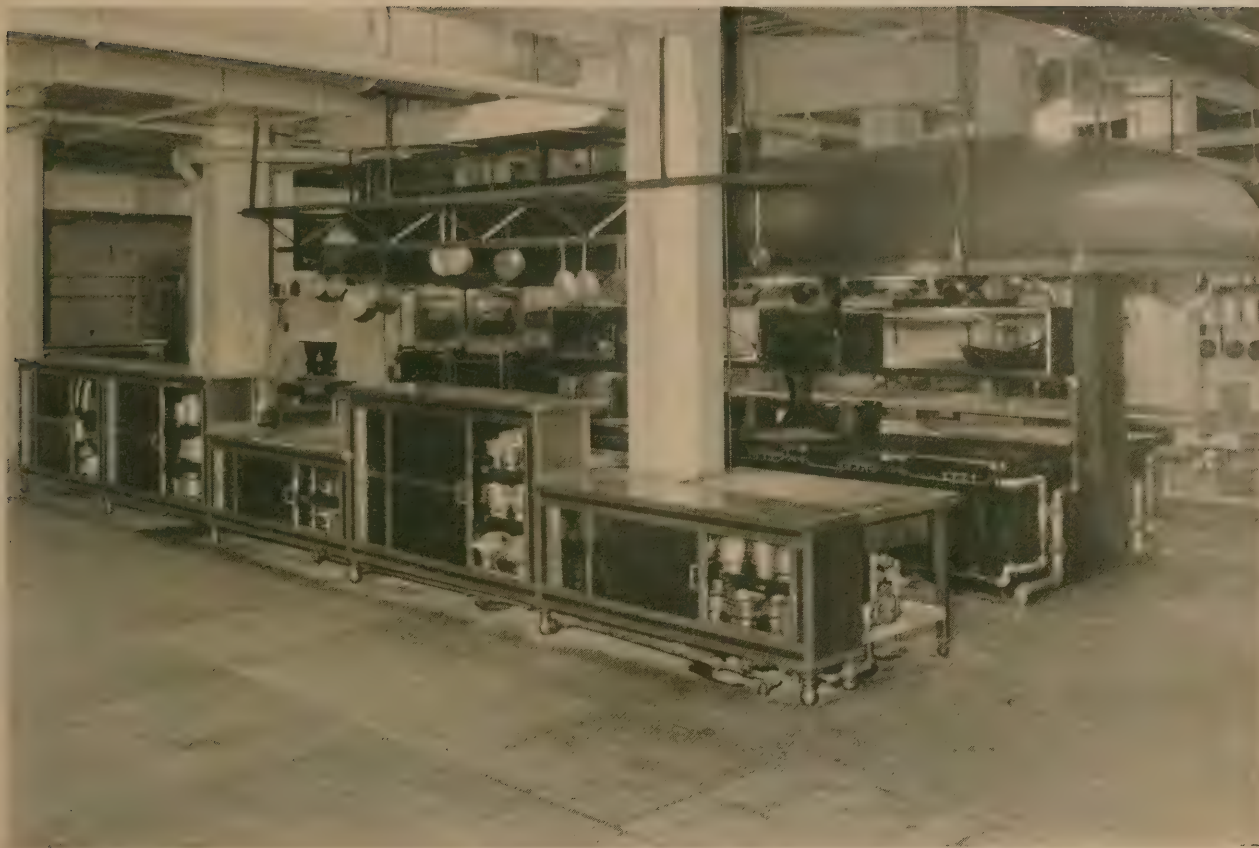
Range and Broiler Division, Hotel Book Cadillac, Detroit, Mich.



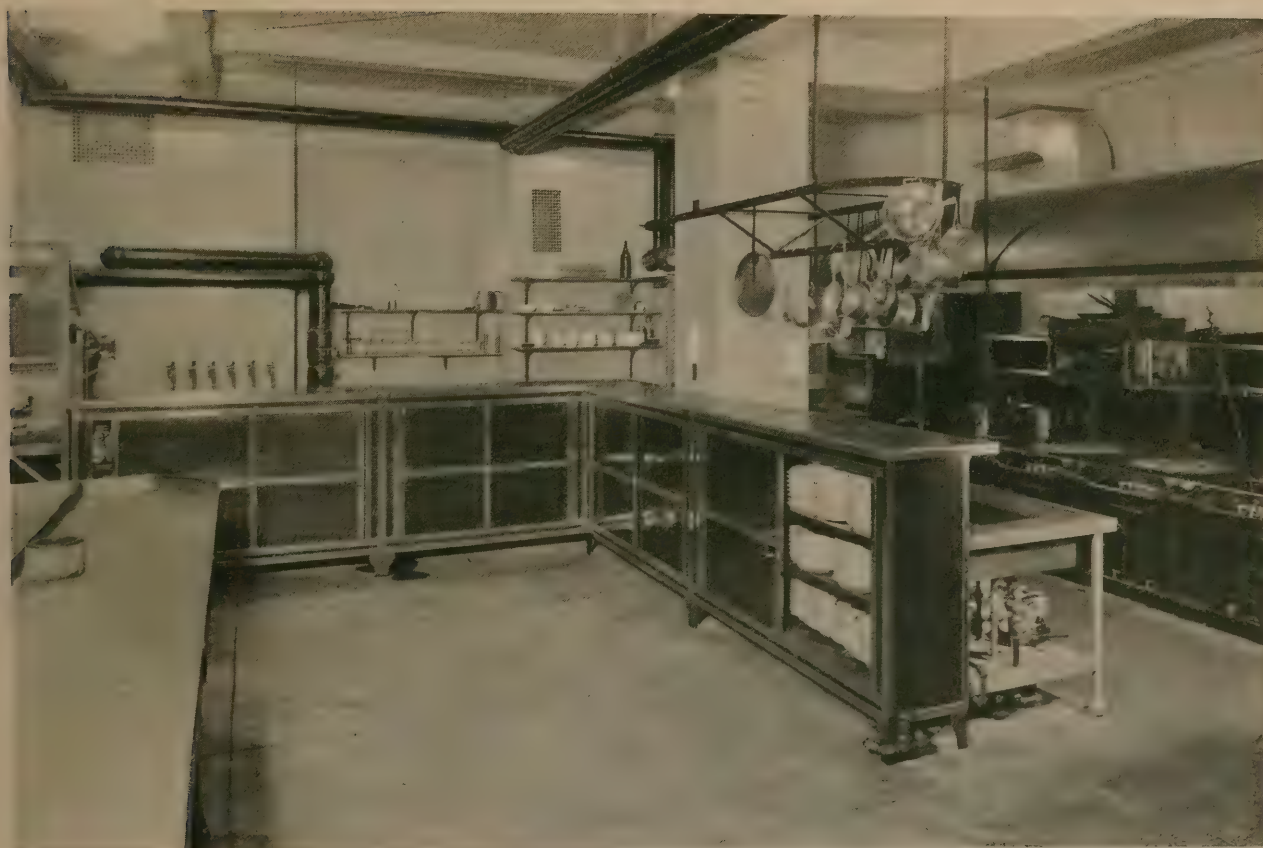
Kitchen of the Hotel Benjamin Franklin, Philadelphia, Pa.



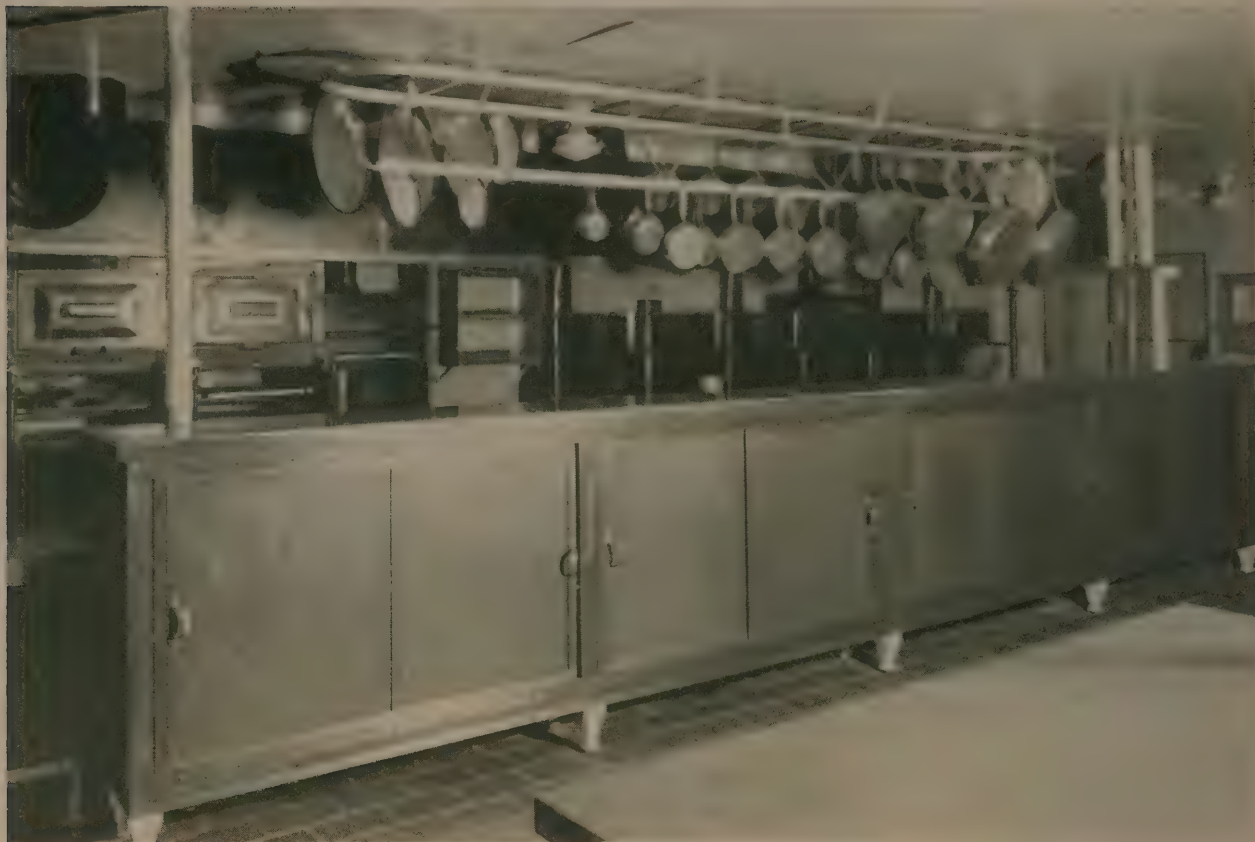
Bank of Ranges, Hotel Benjamin Franklin, Philadelphia, Pa.



Kitchen of the Penn Athletic Club, Philadelphia, Pa.



Kitchen of the Penn Athletic Club, Philadelphia, Pa.



Main Kitchen, The Warwick, New York



Range and Broiler Division, The Warwick, New York

Chapter XIX

General Principles of Food Service Planning and Equipping

In the previous chapter we have spoken of restaurant and kitchen planning as it relates to the architectural arrangement of the building. We can now turn to the actual designing of the food service departments themselves, proceeding upon the assumption that the building plan has reached practically final form. Thus we will now have definite conditions to deal with, and definite results to be reached. It is at this point that the main work of the Equipment Engineer begins.

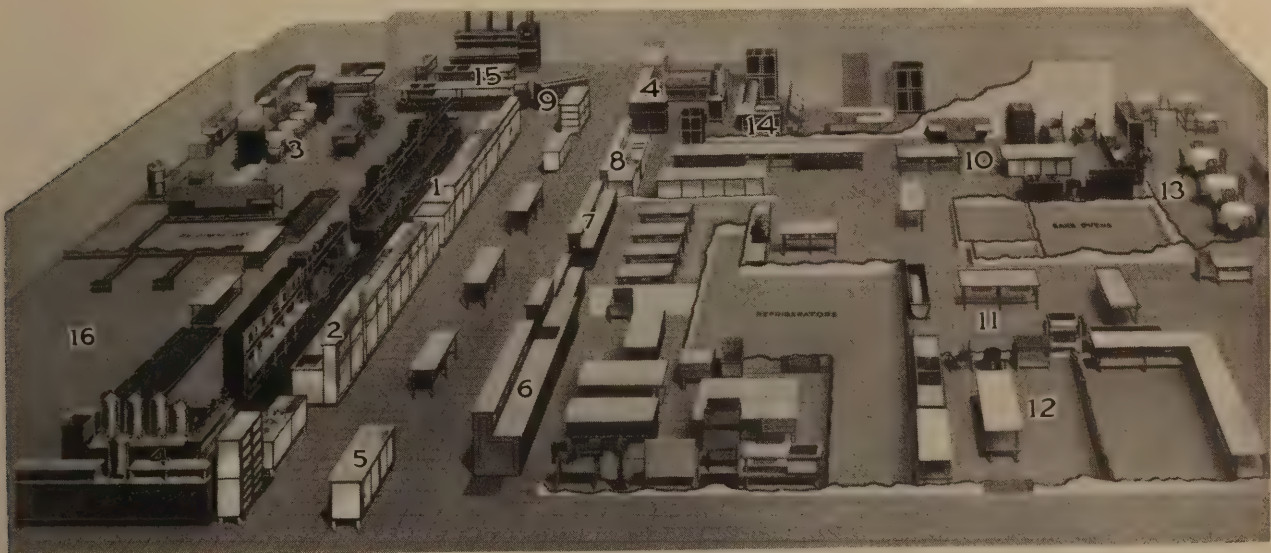
It has puzzled many to discover that two engineers working on the same identical kitchen are quite likely to produce two entirely different plans. In view of the nature of the task, however, this is really not surprising at all. The operation of a kitchen does not represent one single process, but is composed of numerous individual groups whose combination into a general scheme can be reached in several different ways. The planning of a kitchen is therefore like the planning of a hotel, only on a smaller scale, and it is just as natural for two engineers to produce plans reflecting their individual ideas as it is for two architects to do the same thing in their line of work. The differences in the plans, however, should mainly be differences in details, as the best underlying principles have been quite generally agreed upon by competent authorities. Kitchens of very large size leave much more room for variation, of course, because they are so complex. The fact that more than one plan for a

kitchen is possible, however, emphasizes the value of the engineer who has the greatest ability and experience and with the most reliable organization behind him.

Good engineering is the very foundation of the kitchen. It is really a scientific task and one that only a specialist should attempt. For above everything else, a kitchen must operate, and the best of equipment cannot do its work unless correctly arranged and unless experience has dictated its selection. This cannot be overemphasized, as it is proverbial that merely putting a lot of equipment into a bare room does not make a kitchen. Example after example could be given to show how ill-advised planning has resulted in costly operation, excessive labor, low cooking capacity, failure of equipment to operate, slowness of service, poor quality of cooking, large fuel bills, congestion of supplies and dishes, unsanitary conditions, heavy breakage and spoilage, expensive alterations and other losses—all a heavy burden to bear and all unnecessary.

Let us first look at the hotel kitchen in a broad way and make a mental note of the things about its operation which govern the plan. And while we deal here with hotel kitchens, it may be understood that what is said applies with only minor exceptions to those of regular restaurants, clubs, hospitals and eating places in general.

The plan of a kitchen, if it is a good plan, is one



Perspective Plan of the Main Kitchen of the Drake Hotel, Chicago

- | | | |
|---|----------------------------------|---|
| 1. Range section. | 6. Garde mange section. | 12. Confectionery section. |
| 2. Broiler section. | 7. Fruit pantry. | 13. Officers' dining room. |
| 3. Vegetable cooking and preparation section. | 8. Pastry and ice cream section. | 14. Cafeteria for guests' maids and chauffeurs. |
| 4. Breakfast and coffee pantry. | 9. Checker's desk. | 15. Help's kitchen. |
| 5. General service equipment. | 10. Bake shop, pastry section. | 16. Butcher shop and refrigerators. |
| | 11. Bake shop, bread section. | |

which has been based upon the following factors of operation:

1. *Cooking and Food Preparation*—including the organization of cooking into efficient units, the provision of the proper facilities for the work, the arrangement of cooking equipment for best operation, etc.
2. *Serving and Handling of Waiter Traffic*—including the provision for serving of food in good condition, the arrangement of departments to permit swift passage of waiters to departments in the right order for good service, the convenient location of dish, silver and roll heaters, serving pantries and other facilities for waiter use, etc.
3. *Receiving, Storage and Routing of Food and Supplies*, including all the facilities and arrangement to permit the progressive flow of food and supplies from the receiving entrance through the necessary preparation and cooking departments and to the line of service; also the provision for the storage of foodstuffs, both refrigerated and otherwise, and of china, glassware, silverware, linens and similar supplies and accessories.
4. *Cleaning, Handling and Storage of Dishes, etc.*—including not only the necessary dishwashing, glass washing, silver cleaning and burnishing facilities, but also the provision of dish heating and cooling equipment at the right points and of conveyors or subveyors if needed.
5. *Food Control and Checking* both as applied to the receiving and interdepartmental transfer of food and supplies and as to waiter checking.
6. *Cost and Efficiency of Fuel and Power*, involving the application of gas, coal, electricity, steam or other fuels as dictated by their cost, avail-

ability and effectiveness for each class of cooking.

7. *Refrigeration Engineering*, including the provision of refrigerators of the right size and arrangement for all the needs of storage, preparation and service, as well as their proper construction and the provision of refrigerating machinery of the right type and capacity.
8. *Cleaning, Sanitation, Maintenance, etc.*, which includes the facilities for keeping the kitchen in perfectly clean and sanitary condition, and also for the maintenance and repair of equipment.
9. *Mechanical and Engineering Requirements* which involve the provision of gas, steam, power, water, etc., in the proper amount and at the right place, the handling of ventilation and lighting, and also matters of building construction, insulation, floor, wall and ceiling treatment, reinforcement, etc.



Kitchen of The Warwick, Philadelphia, Pa.



Hotel Lafayette, Little Rock, Ark.



Hotel Charlotte, Charlotte, N. C.

These are the main aspects of the problem. Planning the kitchen resolves itself into the equipping of each little department with space and facilities needed for its work, and then the grouping of these departments together in a way that permits the flow of supplies into them and the flow of served food out of them while at the same time fitting into the building plan with its exits, entrances, etc., dovetailed into the kitchen arrangement at the right places, and with the mechanical and structural requirements all provided for.

So much for the thought behind the arrangement. Now let us see what are the various divisions or departments which must be fitted together in the plan.

Briefly, these are as follows:

First Group—Range & Broiler Section, Vegetable & Soup Cooking, Vegetable Preparation, Butcher Shop, Scullery.

Second Group—Cold Service and Preparation Divisions for Salad, Fruits, Sea Foods, Ice Cream and Beverages, Pantry for Coffee, Toast, Pastry, etc.

Third Group—Bake Shop, Ice Cream Making, Candy Making and similar preparation departments.

Fourth Group—Dishwashing, Glass and Silver washing, Silver Burnishing and cleaning.

Fifth Group—Storage facilities—storage refrigerators, bulk package and case goods storage, china, glass and silver storeroom.

The general scheme by which these departments are arranged is to group the units with which wait-

ers come in contact into a sort of hollow rectangle, all facing toward the inside. Within this hollow rectangle the waiters circulate. Outside of it the various preparations are arranged, each one if possible directly behind or near the section from which its production is served.

To help visualize this theory of arrangement clearly an actual kitchen plan has been taken (see page 337) showing a bird's-eye view or perspective plan with each of the departments identified. For this purpose the main kitchen of The Drake Hotel, Chicago, has been selected. This is a good example of planning under ideal conditions, with neither space nor equipment slighted to any appreciable degree. This is a very large kitchen, but the fact that it is simple in its arrangement and clearly departmentalized makes it an excellent kitchen to study in order to understand the main points of kitchen planning. The Drake kitchen also illustrates conditions which are frequently met with, such as exits to two different dining rooms, ample room for service equipment and space for banquet preparation, room service and help's dining room.

Fundamental Principles of Arrangement

The ideal shape for any kitchen is rectangular, and about one and one-half times as long as it is wide, with the supplies entering from one side and gradually moving through the various departments to the service counters where they are served to the waiters.



Kitchen of the Hotel Belden-Stratford, Chicago



Hotel Coronado, St. Louis, Mo.

In the arrangement of the kitchen first consideration must be given to the supply entrance. This necessarily must be conveniently located to the main storeroom and storage refrigerator. In most instances these are located in basements, and supply elevators and broad stairways must lead directly to them and large scales be furnished to check the weights of all goods. The storage refrigerator should have at least three or four compartments to permit segregation of different types of food. Having determined the supply entrance, the next consideration should be given to having these supplies move forward to the various departments of preparation, then to service counters with the least possible retracing of steps. The kitchen proper, as already said, should be of the hollow rectangle arrangement and fitted for right-hand (counter-clockwise) service for the main dining room, if possible. The right-hand side should be supplied with a series of steam tables, short order counter and pantry counter, while on the opposite side should be located the garde manger counter, pastry counter, soda fountain and checker's desk. Back of these stations, if possible, and if not, as closely located as the shape of the room will permit, are placed the preparation rooms for these various departments. The center of the room is provided with a series of dish heaters, silver heaters, a roll warmer or two, and all of them should be built of such height as to form a convenient tray rest. The fronts of all the service counters should be built with the front section elevated about 16 inches above the level of the working space back of it, and the counters are either heated or refrigerated according of requirements. The work

tables back of them are to be fitted with the various steam tables, sinks, etc., that are necessary to keep the hot food hot and the chilled food cold.

Many hotel kitchens must meet the requirements of dining rooms located in different directions and, consequently extra exits are provided at opposite ends of the service counters, and, as in the case of the Drake, double pantry counters. The aisle between the service counters must be made amply large to accommodate the number of waiters which the dining room will require. One waiter cannot profitably take care of more than three four-chair tables and, consequently, if the combined dining room space accommodates 300 persons, 25 waiters will be necessary, and

at least half of them will be in the kitchen at once.

In large hotels where the dining rooms are not located on the same floor as the kitchen, service pantries adjacent to these dining rooms are necessitated, as otherwise the service would be entirely too slow. In these service pantries there should be a small ice box, urns and cup warmer, dish and condiment cabinets, ice chest, dish heater and other similar conveniences.

All entrances to the dining rooms should be guarded by vestibules with double doors for right and left hand entrances, so that the confusion and noise of the kitchen may not be objectionably noticed by the diners.

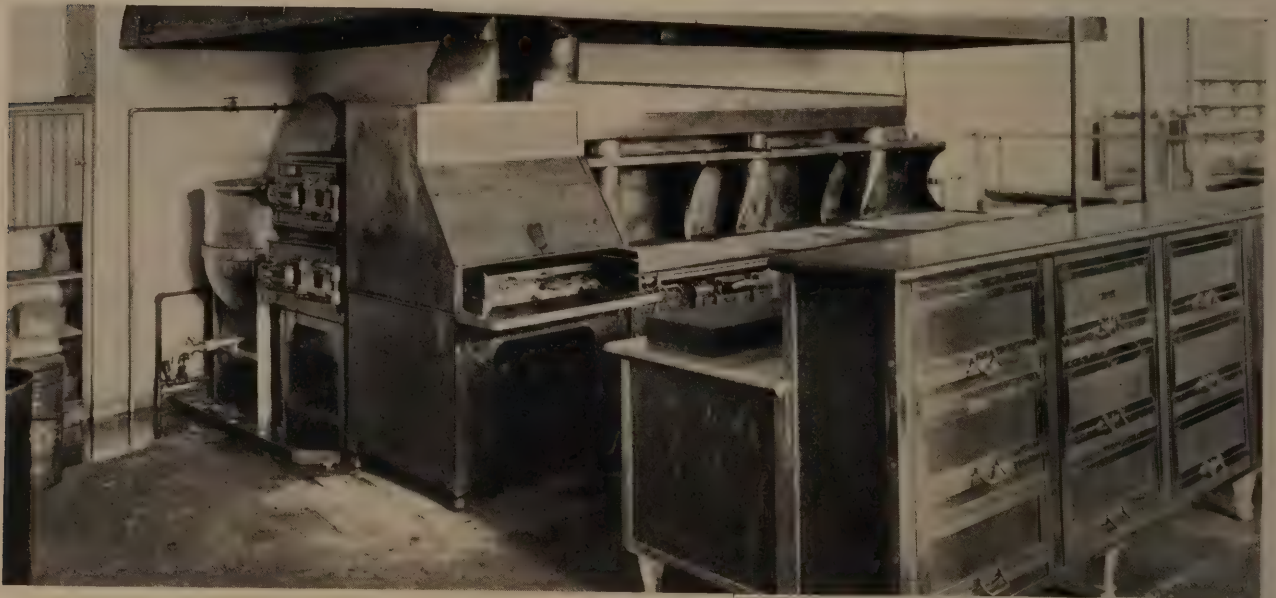
All hotels must give consideration to room service. For this separate dish heaters and silver heaters are supplied and table space arranged so that set-ups may be made ready to put on the elevator to be carried to the floors where they are to be used.



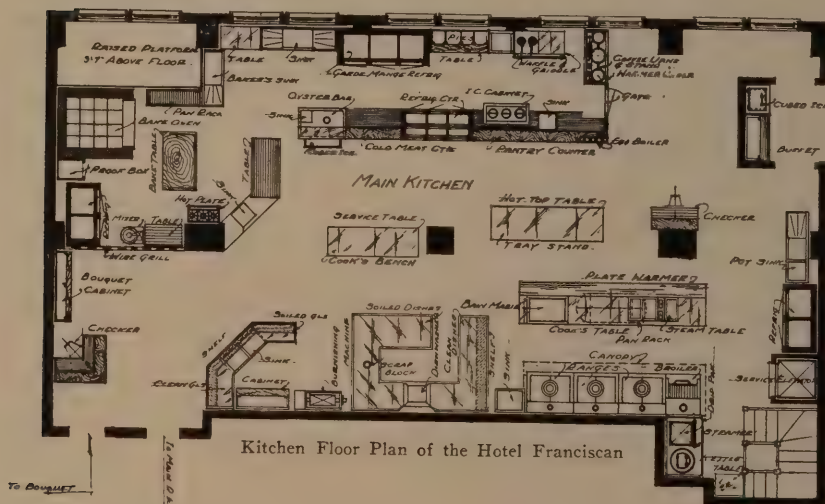
Hotel McAllister, Miami, Fla.



Kitchen, Hotel Franciscan, Albuquerque, N. M.



Range and Broiler Section, Hotel Franciscan, Albuquerque, N. M.



Kitchen Floor Plan of the Hotel Franciscan

THIS plan shows a kitchen arrangement including bake shop, service pantry, dish-washing pantry and main service, cook's tables and heaters. Store rooms and storage refrigerators are detached from this plan. The service is two-way, right hand service going to the coffee shop and the left hand service going to the main dining room and banquet room.

The Kitchen of the Hotel Franciscan was planned and equipped by the PICK-BARTH Companies.

In very large hotels separate room service pantries are maintained on each floor for this purpose, but this is not a necessity in a hotel of less than 500 rooms. Separate closets and heaters for this service are almost a necessity to keep a check on what is delivered and returned to avoid possible theft.

We will now consider briefly the arrangement and facilities of each of the various departments.

Ranges and Broilers

The most important part of the cooking equipment is naturally the range, and a wide variation occurs as to the preferences on this piece of equipment. Only a few years back nothing was used except a coal range in 4-foot sections with a fire and oven in each section. In recent years the convenience of gas has entirely revolutionized this condition, and nearly every kitchen today is supplied with gas ranges.

A gas range will do anything that a coal range can do, and is cleaner and more desirable in every way. It can be made suitably hot in much less time and it is also possible to heat any portion for a short time only. With intelligent use it can be made almost as economical as a coal range. For heavy constant duty, the type of range with a solid top seems to answer general requirements best. If desired, it is possible to have one or more of the open top ranges or steel plates supplied in the length of the range battery, enabling the user to have the short order features together with the more economical closed top features side by side.



Hotel Wausau, Wausau, Wis.

Some sections of the country have found oil practical for fuel, especially where crude oil may be obtained at a very few cents per gallon.

For gas, coal and oil ranges, etc., the size and location of flues is extremely important. This is too complicated a matter to discuss here, but should always be taken up with the kitchen engineer to insure satisfactory operation.

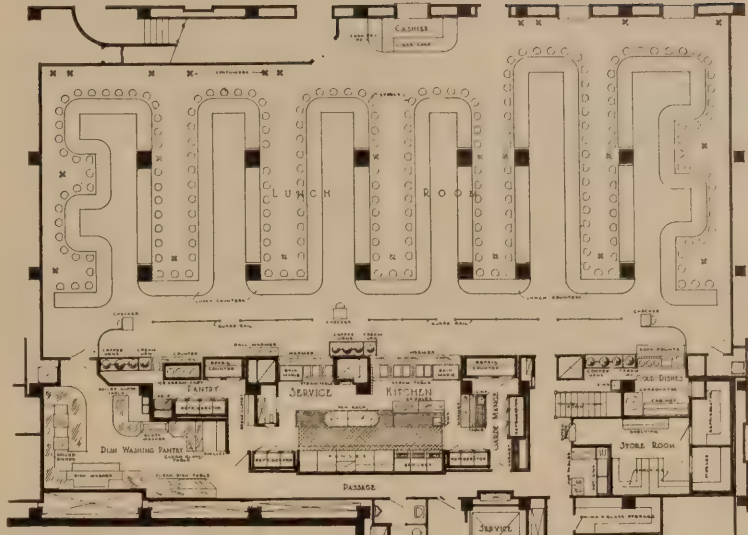
With the development of large power stations throughout the country electric ranges are coming



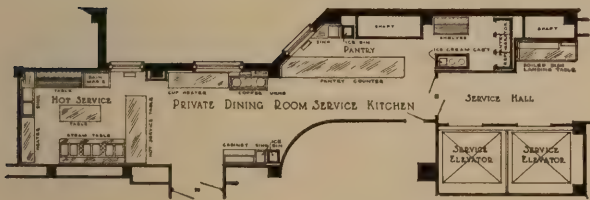
Kitchen of the Hotel Jamestown, Jamestown, N. Y.

Palmer House, Chicago

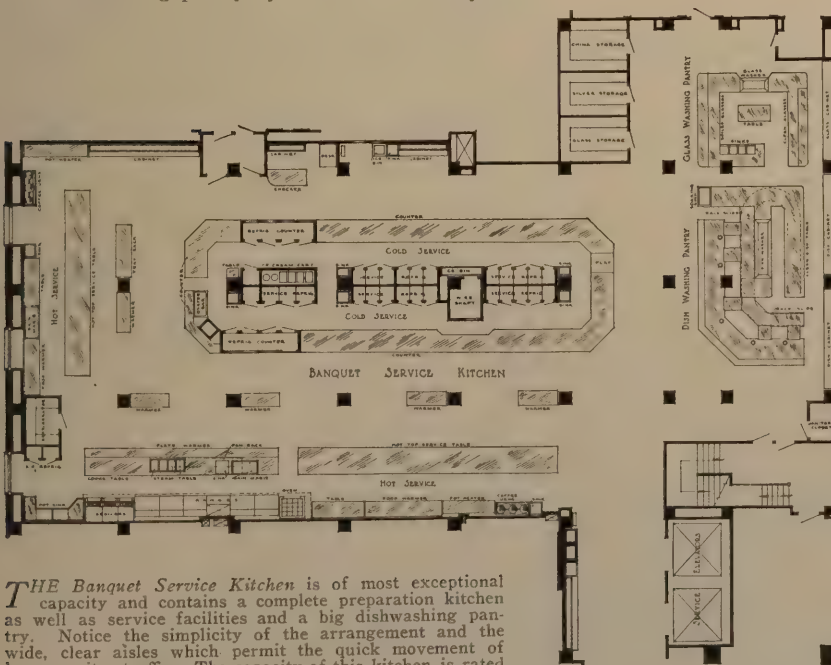
THE equipment of the Palmer House kitchens is of such extraordinary character that it deserves particular mention. As may be seen from the photographs on pages 353-355 it is made almost entirely of heavy gauge Monel Metal and represents about the most permanent, as well as the most beautiful, quality that money can buy, and an indication of the tremendous size of the kitchen may be gained from the fact that over 136,000 pounds of Monel Metal were used. Practically all of the equipment was of special design because of the size and character of the kitchens and the majority of the equipment was built by The PICK-BARTH Companies, as was also the case with the equipment for the Hotel Stevens, Chicago (see pages 329-331) which is of a much similar character.



THE Palmer House Lunchroom is a multiple horseshoe lunch counter, seating 200 people. As may be seen from the illustration on page 390, the counter itself is of a special type and has no center counter equipment but is served over a grill arrangement opening from the kitchen. The lunchroom kitchen is a complete unit although it adjoins the kitchen of the main cafe.



THIS plan shows the special Private Dining Room Kitchen which serves small banquets and parties. The preparation is done in the main kitchen as this kitchen is equipped only for serving. Dishes are sent to the main dishwashing pantry by means of a subveyor.



THE Banquet Service Kitchen is of most exceptional capacity and contains a complete preparation kitchen as well as service facilities and a big dishwashing pantry. Notice the simplicity of the arrangement and the wide, clear aisles which permit the quick movement of heavy waiter traffic. The capacity of this kitchen is rated as 5,000 meals per hour.

THE Chicago Room Kitchen is shown in the above plan adjoining the lunch room kitchen. It is a complete kitchen by itself but is connected by service elevators with the main kitchen and the preparation kitchen. The dining room it serves seats 400 people and does a very large dinner and luncheon business, both à la carte and table d'hôte. The kitchen is compact in size and designed for quick and efficient service and it has the rather surprising capacity of 600 meals per hour without pressure.

The complete equipping of the Palmer House Kitchens was handled by the engineers of the PICK-BARTH Companies, including the manufacturing of the large majority of the products used.

Holabird & Roche,
Architects



Hotel Book-Cadillac, Detroit, Mich.



Hotel Sheraton, High Point, N. C.

more and more into demand. These ranges usually have at least four separate heat controls for the top and two for the oven, each control being capable of three different heats. This gives absolute heat control at all times, which may be rapidly changed as occasion requires, and it is considered by many the finest cooking range that can be made. In order for the cost of operation to compare favorably with gas it is necessary that the current cost be not over 2 cents per kilowatt as compared with gas at \$1 per 1,000. Such power rates are frequently offered by the large com-



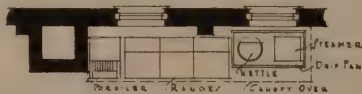
Hotel Allerton, Cleveland, O.

panies in the principal cities to induce customers to install this type of equipment.

Broilers are generally built for gas, with now and then a preference for charcoal and, as is the case with ranges, there are many installations of electric broilers. Many broilers are supplied with heating ovens above, further utilizing the heat of the burners below. Adjacent to these broilers must be a short-order box with all raw foods prepared ready for immediate use. A large

hotel should be furnished with at least two broilers, one to be used for fish and the other for meats.

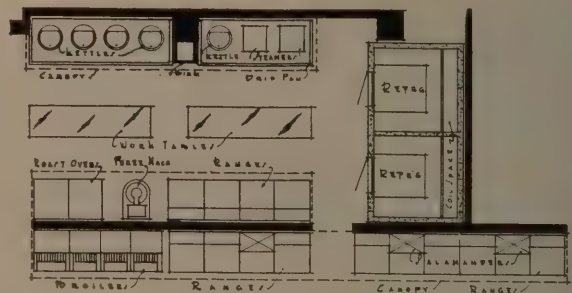
Typical Range Broiler and Vegetable Cooking Sections



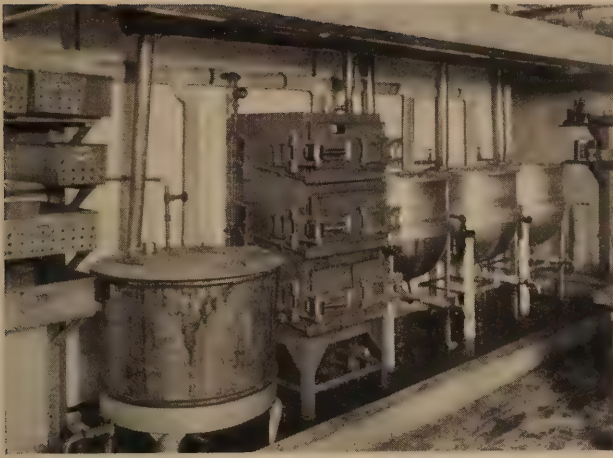
This plan shows a small department with one broiler, three sections of range, a stock kettle and a vegetable steamer. It indicates the usual requirements of the kitchen for a dining room with a seating capacity of from 70 to 150 persons serving 400 to 700 meals per day. The 9 ft. cooking top on the ranges together with the three ovens underneath the top provides ample space on which to prepare the daily menu. The stock preparation work and all the vegetable and meat steaming process can be done with the kettle and steamer which relieves the ranges of this work.



The ranges, broiler and vegetable cooking division, shown in this cut, indicate a preparation battery used in restaurants with several hundred seats. It will take care of the Main Dining Room requirements as well as Coffee Shop and Banquet Room service. Separate broiler for fish and steak work are shown, together with three units or 9 ft. of range top with ovens below for the fry cook and five sections or 15 ft. of range top with five ovens for the second cook and vegetable cook. The stock kettles consist of 40-gallon, 50-gallon and 60-gallon sizes and a three compartment steam cooker for steaming vegetables and meats. These relieve the work on the ranges and produce many savory articles of food through the medium of steam cooking.



This arrangement of multi-broilers, ranges, kettles and steamers represents the kind of large installation used in hotels of from 600 to 1,000-room or more capacity. The broiler chef has a battery of broilers for fish, chicken and meat broiling adjacent to which the fry cooks have their ranges with small broiler or salamander in the shelves for au gratin work as well as platter heaters built into the range shelves proper. Second cooks and vegetable cooks have their separate and independent bank of ranges and this division enables each man to perform his work with the least amount of confusion and interference. Vegetable compartment steamers, stock and soup kettles, puree machines and potato mashers are placed in the vegetable room in the rear of the service line so that the work of food preparation does not interfere with the labor of serving. Refrigerators in this room supply ample storage for cooked and uncooked vegetables and provide a holdover storage for later requirements.



Hotel Thayer, West Point, N. Y.



Hotel Mayflower, New York.

The entire range and broiler section, including the steam kettles and steamers in the rear, should be located under a special hood with carefully graduated openings in a perfectly balanced ventilating system to insure a uniform change of air at all points and to remove food odors. This is also necessary because otherwise the intense heat of the ranges becomes unbearable, and it is impossible to keep people working in front of them.



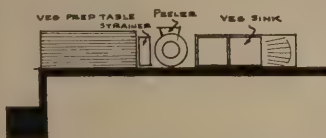
Hotel Roosevelt, New Orleans, La.

Cooks' tables should be provided in front of the line of ranges for the convenience of the chefs. These generally are 36 inches wide and should be placed about 48 inches in front of the ranges. For this purpose metal top tables are the best, both as to permanence and sanitation. Such tables may be made of either steel or monel metal and preferably should be constructed with rolled edges. Sectional maple top tables are in some demand because of their lower

cost, but are less desirable than metal and, in the end, less economical.

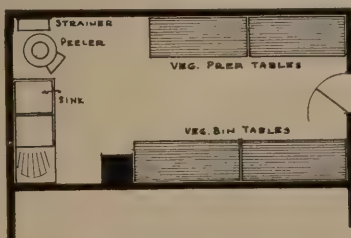
cost, but are less desirable than metal and, in the end, less economical.

Typical Vegetable Preparation Divisions of Various Sizes

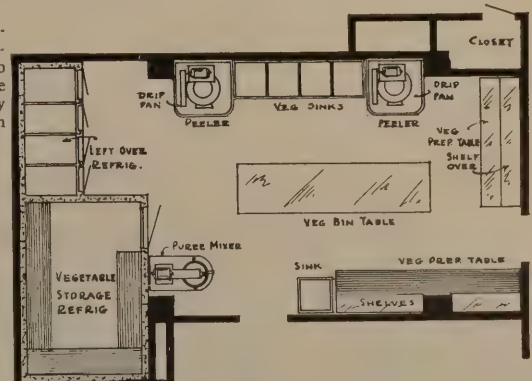


The behind-the-scenes work for the preparation department of a hotel kitchen requires certain machines and fixtures to accomplish its work as illustrated in the accompanying cuts. These are generally segregated in a small room or section near the steamers and kettles.

A small kitchen generally will need an arrangement, such as shown above, comprised of a 6 ft. vegetable table, a small vegetable peeling machine and a two-compartment vegetable sink with either one or two drainboards. The fact that a saving of about 20% in vegetables can be had by peeling with a machine indicates that this labor-saving device would pay for its investment in a short time besides saving tedious hours of hand peeling.



The plan at the left shows a department practically the same in character as the above, but larger in size. The larger size potato peeling machine with more preparation tables and washing sinks permits a faster preparation for restaurants of fairly large capacity.



The larger kitchens quite often require double lineups to take care of the requirements demanded of the preparation room and two or more vegetable peeling machines with larger washing and soaking sinks, together with suitable bin tables and work tables for the preparation of the vegetables, meet their needs. Quite often in larger installations refrigerators are installed in the vegetable rooms to refrigerate the prepared but uncooked vegetables. Hand and power operated machines for cutting, cubing and slicing vegetables, in various forms and shapes, are installed on the work tables and in addition to saving many hours of hand labor turn out a more uniform production.

In the same line as the cooks' tables and sometimes built into them are the steam tables and bain maries, and in front are the dish heaters over which the food is served to the waiters. One or more sinks, either in the line of ranges or nearby must be provided to save steps for the chef and cooks. Over the top of the cooks' tables and either securely anchored to the ceiling or mounted on the cooks' table is the sauce pan rack to accommodate all pots and pans not in use.

Vegetable Preparation Section

The next consideration is the preparation of the food for cooking, and modern ingenuity has invented machines which have to a great extent done away with the heavy, tedious labor of the kitchen, for which it was so difficult to obtain help.

All vegetables are washed and peeled in electrically operated peeling machines, which, in addition to saving labor, effect a great saving in food. In the preparation of meats, electrically driven chopping and grinding machines are considered a necessity. Similarly, slaw cutters, vegetable slicers and other attachments are made for the various kitchen machines which materially assist in solving the labor problem. Electric mixing machines are extremely useful.

No less consideration must be given to the regular equipment, such as tables, sinks, meat blocks and benches. Tables, as has been said, may be either with wood or metal tops, preferably the latter. Where wood tops are used they should be of sectional maple construction, either three or four inches thick. Such a table, if properly made, is very durable; water will not warp it and heat will not check

it. The top may be used as a cutting board without an intervening wooden block. However, although the original expense of the high grade metal table is greater, the satisfaction and life of such equipment more than make it pay to make this selection at the start. Sinks should be plentiful and only heavy gauge metal sinks will answer for the hard and rough usage a kitchen demands. The better type of sinks are of welded construction, galvanized after fabrication. Where the maximum of durability and appearance is desired, monel metal is used instead of galvanized steel.

Vegetable Cooking

We now come to the important department of cooking the food, its preparation after being cooked and facilities for keeping it in condition.

Steam should be utilized wherever it is available. Steam cookers, stock kettles, steam heated steam tables, urns and dish heaters all save space and money. So valuable an asset is steam, that it is often provided by a separate boiler for this purpose, operated either by coal or gas.

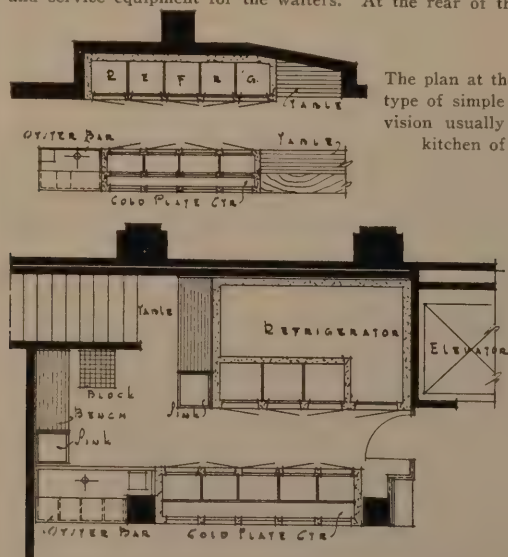
Vegetable steamers are of two types, open and sectional. Open steamers allow a great deal of vapor to escape into the room and are generally inconvenient. Their use has given way to the closed type with two or more compartments sealed from each other by water traps so as to make it possible to cook different articles in the various sections without mingling of flavors or odors. One three-section steamer has a capacity equal to two sections of range and does the work much more quickly and perfectly. Potatoes are made mealy and white by

Typical Cold Service Division of Various Sizes

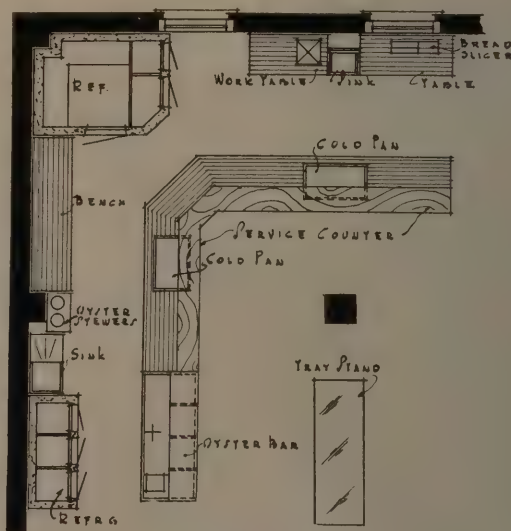
Cold service forms an important part of every kitchen the year around and the three plans illustrated show the fixture requirements of this department. Oyster service in the Fall and Winter months require an oyster bar of slate or stone construction, provided with icing compartments for the oysters and equipped with cracked ice bins for the service setup on the front side. Cold plate counters and counter refrigerators are designed to give real cold service even in the hottest months of the year. Adjacent preparation counter and dish storage shelving provide complete working and service equipment for the waiters. At the rear of the service

lineup storage refrigerators and work tables are arranged at convenient points for the service. From this department cold meats, vegetables, relishes, etc., are served from the refrigerated counter and storage ice boxes.

As the menu increases in variety the pantry must increase to meet its demands which means providing separate departments for oyster service, cold meat service and garde manger service. In all three plans shown labor-saving devices such as meat slicing machines, bread slicers, toasting machines, oyster stewing kettles, etc., are essential to proper operation.

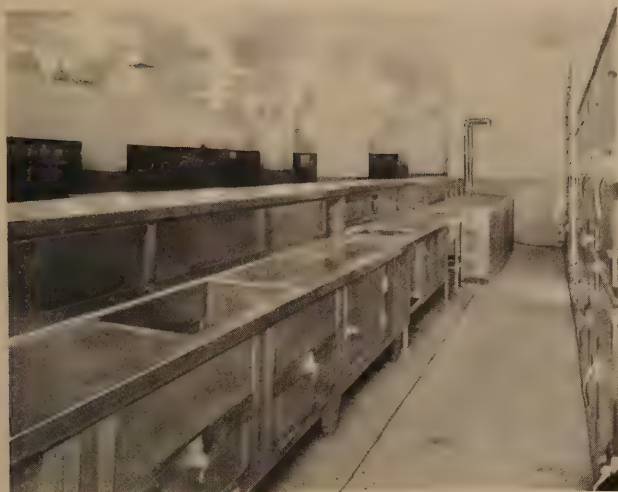


The plan at the left shows the type of simple cold service division usually provided in a kitchen of small size.



This cold service division is appropriate for a fairly good sized kitchen and includes a storage refrigerator in addition to generally enlarged facilities.

This large plan shows a subdivided department with separate sections for sea food, garde manger and cold meats. It is a typical kitchen of very large capacity.



Cold Service Counter, Palmer House, Chicago



this method, as they have no chance to become water soaked. The latest improved type of sectional steamer has a body of heavy boiler plate steel electrically welded together and an automatic steam inlet valve which opens as the door is closed and closes as the door is opened. The steaming baskets rest upon a slide which is automatically pulled forward when the door is opened. These two features eliminate the danger to the operator of scalding from the steam. It also is much lighter and easier to erect than its cast iron predecessor.

Stock kettles, made of aluminum, cast iron, re-tinned or block tin lined copper, nickel or monel metal, are essential. Soup stock to be the best must be cooked slowly and the top of one section of range would otherwise be required for this purpose in any kitchen feeding 1,500 a day. Steam roasters are also popular. All of these fixtures have double walls forming a steam jacket designed to operate at a pressure of from 35 to 50 pounds. A large faucet is connected by a pipe to an opening in the bottom of the kettle and the entire fixture is mounted on a heavy stand.

All steam fixtures should, if possible, be placed under a central canopy which is connected by ducts to the ventilating system. This canopy should be fitted with gutters pitching to one point where a pipe takes away the condensation. It also should

be fitted with abundant lights which serve the double purpose of assisting the cooks in their work and calling attention to any collection of dirt so plainly that it will be removed before it can fall into the food. All steam kettles and steamers should be placed in a drip pan, which is in reality a shallow deep sink with a waste connection at the center or one end and so installed as to pitch toward the drain. Swinging water arms must be placed over the soup kettles. The vents of kettles and steamers should if possible be connected to a separate flue leading out of the building and should have a bleeder pipe at the lowest point in the vent line.

Cold Service Stations

Two of the most popular and profitable stations in the kitchen are the garde manger and salad counters, which should be located adjacent to each other and in front of ample service refrigerators. The salad counter should have plenty of table space back of it to enable multiple orders to be prepared in advance and placed in the refrigerators ready for service. The counters themselves should be refrigerated to insure cold plates for this service. The garde manger or cold meat counter is supplied from a preparation room in which are located meat choppers, sinks, meat grinders, meat blocks, cutting benches and work tables.

(Continued on page 364)



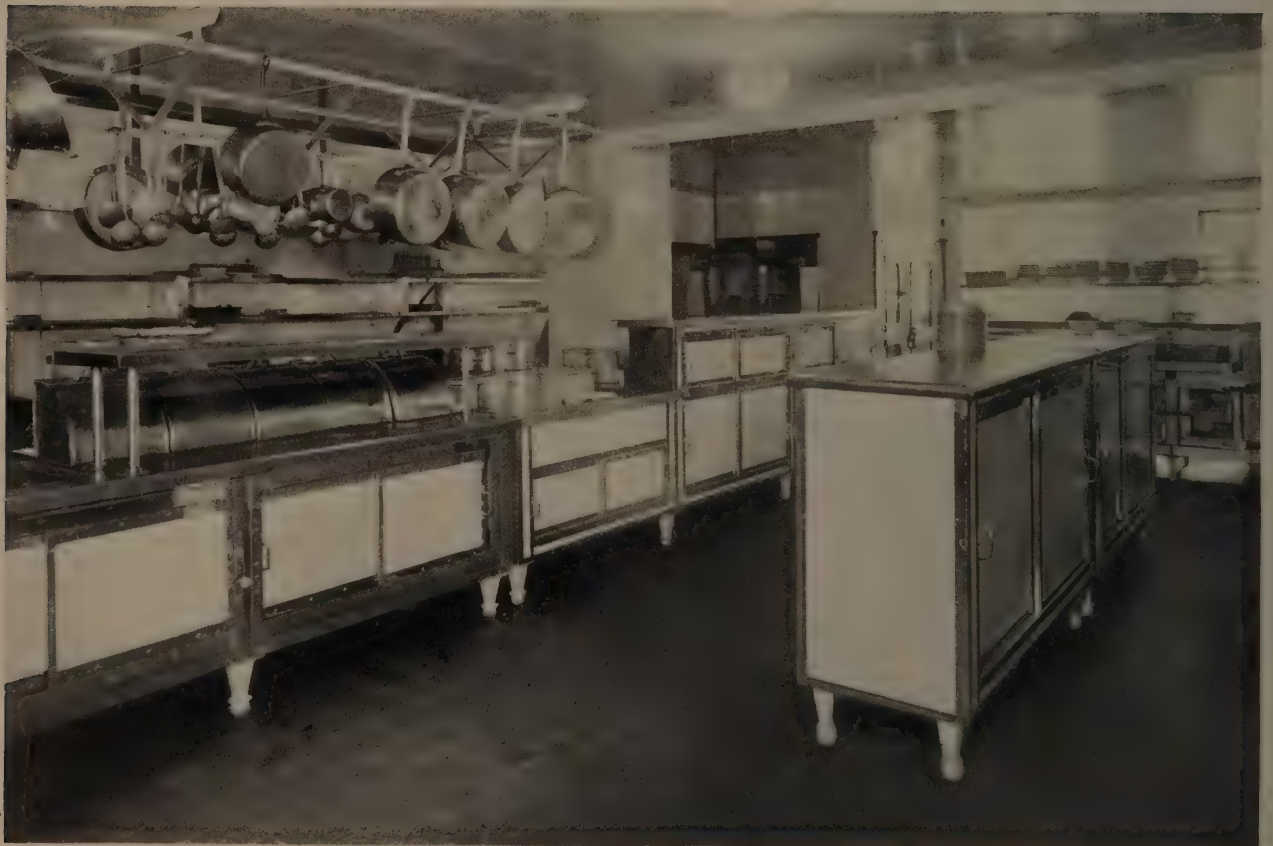
Cold Service, Edgewater Beach Hotel, Chicago



Butcher Shop, Ritz Towers, New York



Kitchen, Hotel John Sevier, Johnson City, Tenn.



Coffee Shop Kitchen, Edgewater Beach Hotel, Chicago



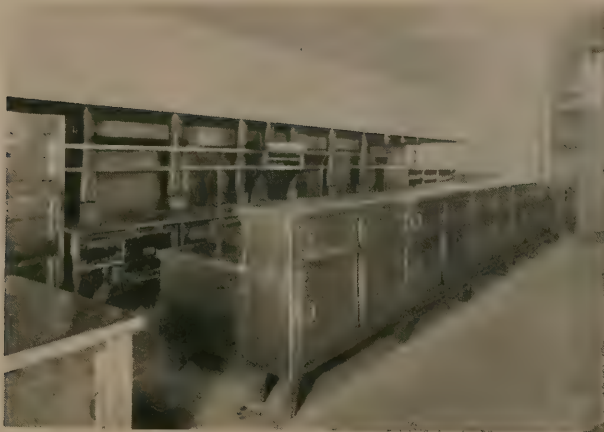
General View of Main Kitchen, Palmer House, Chicago



Range and Broiler Section, Palmer House, Chicago



Banquet Service Kitchen, Palmer House, Chicago



Two Views of the Banquet Kitchen, Palmer House, Chicago



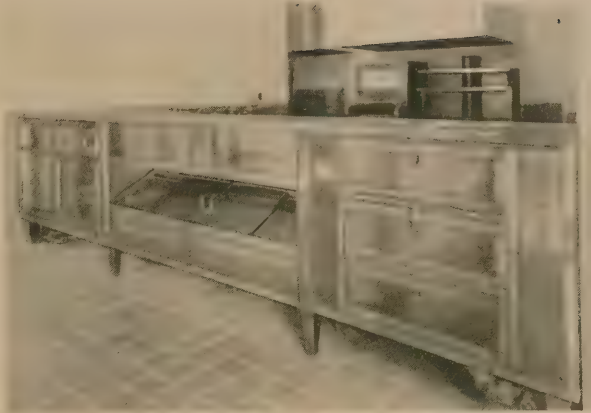
Banquet Dishwashing Room, Palmer House, Chicago



Lunchroom Service Counters, Palmer House, Chicago



Breakfast Pantry, Palmer House



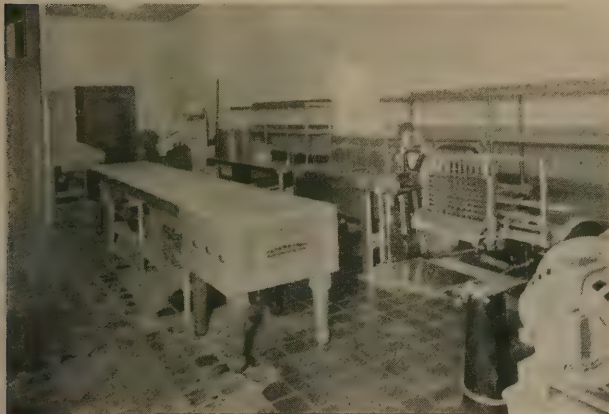
Shellfish Counter, Palmer House



Griddle, Waffle and Toaster, Palmer House



Chicago Room Kitchen, Palmer House



Butcher Shop, Palmer House



Vegetable Preparation Room, Palmer House



Electric Ovens, Palmer House



Ice Cream Room, Palmer House



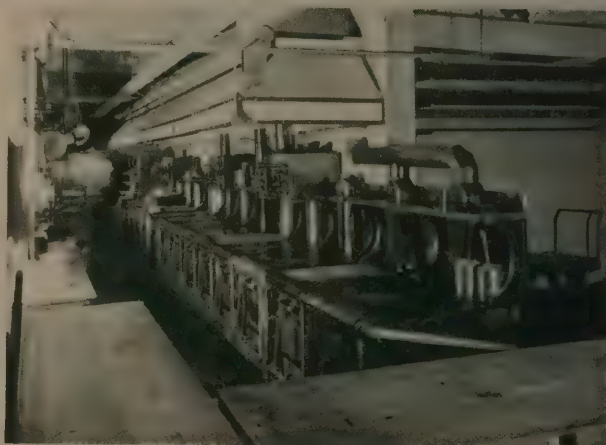
Main Kitchen, Mayflower Hotel, Washington, D. C.



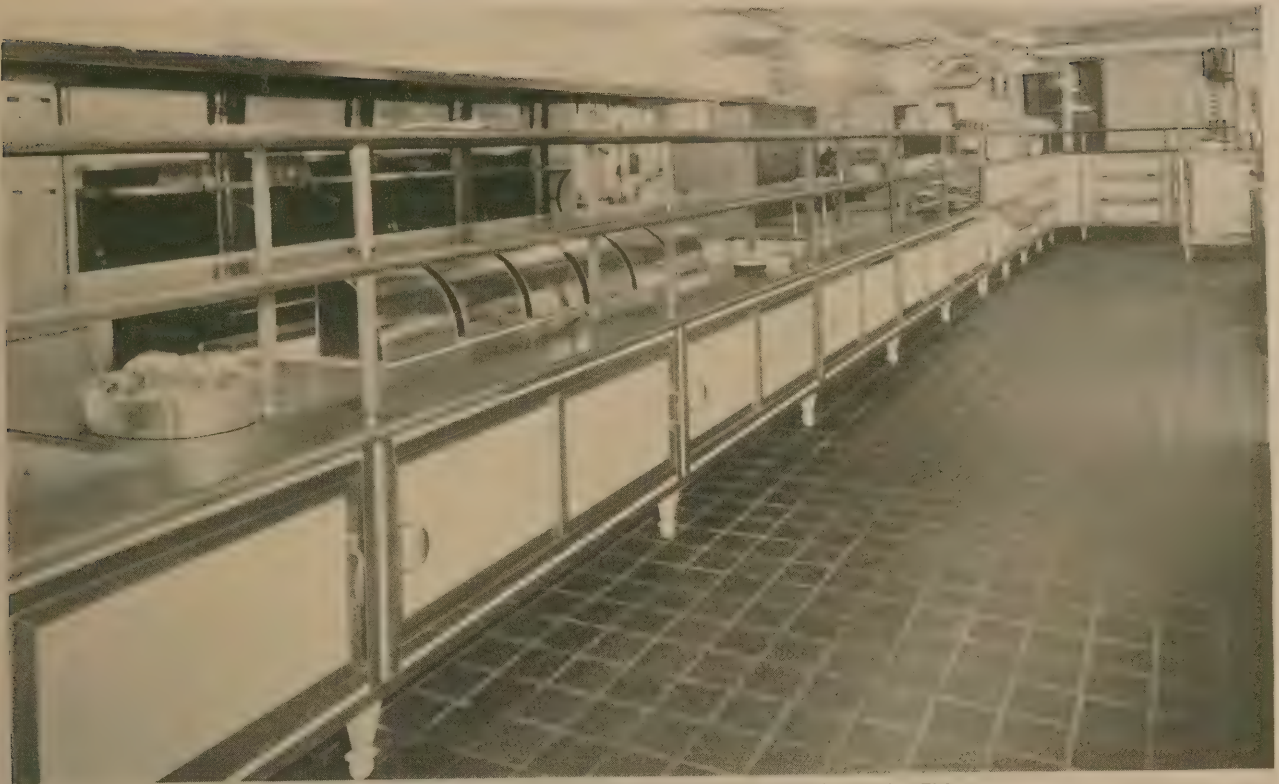
Two Views of the Main Kitchen, Mayflower Hotel, Washington, D. C.



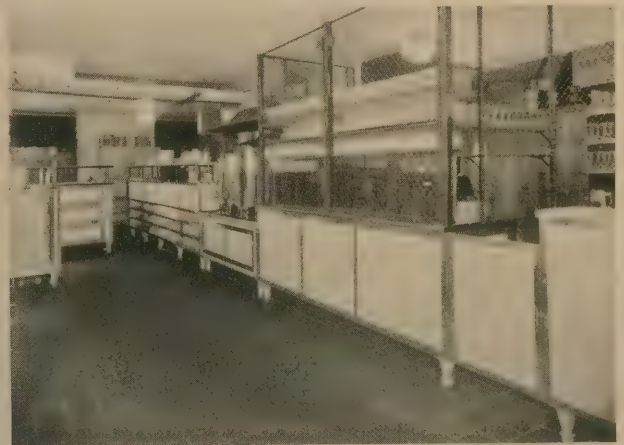
Banquet Kitchen, Mayflower Hotel,
Washington, D. C.



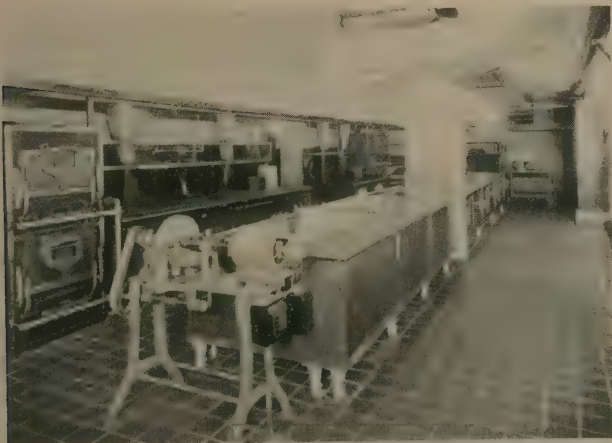
Range and Broiler Division, Mayflower Hotel,
Washington, D. C.



Main Kitchen, Range and Broiler Section, Hotel Bismarck, Chicago



Two Views of the Main Kitchen, Hotel Bismarck, Chicago



Coffee Shop Kitchen, Hotel Bismarck



Coffee Shop Lunch Counter, Hotel Bismarck



Main Kitchen of the Union League Club, Chicago



Banquet Kitchen, Union League Club



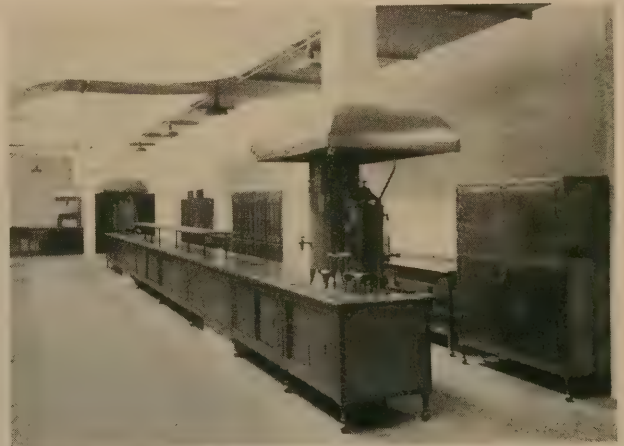
Women's Dining Room Kitchen, Union League Club



Two Views of the Grill Kitchen, Union League Club, Chicago



Main Kitchen, Girard College, Philadelphia, Pa.



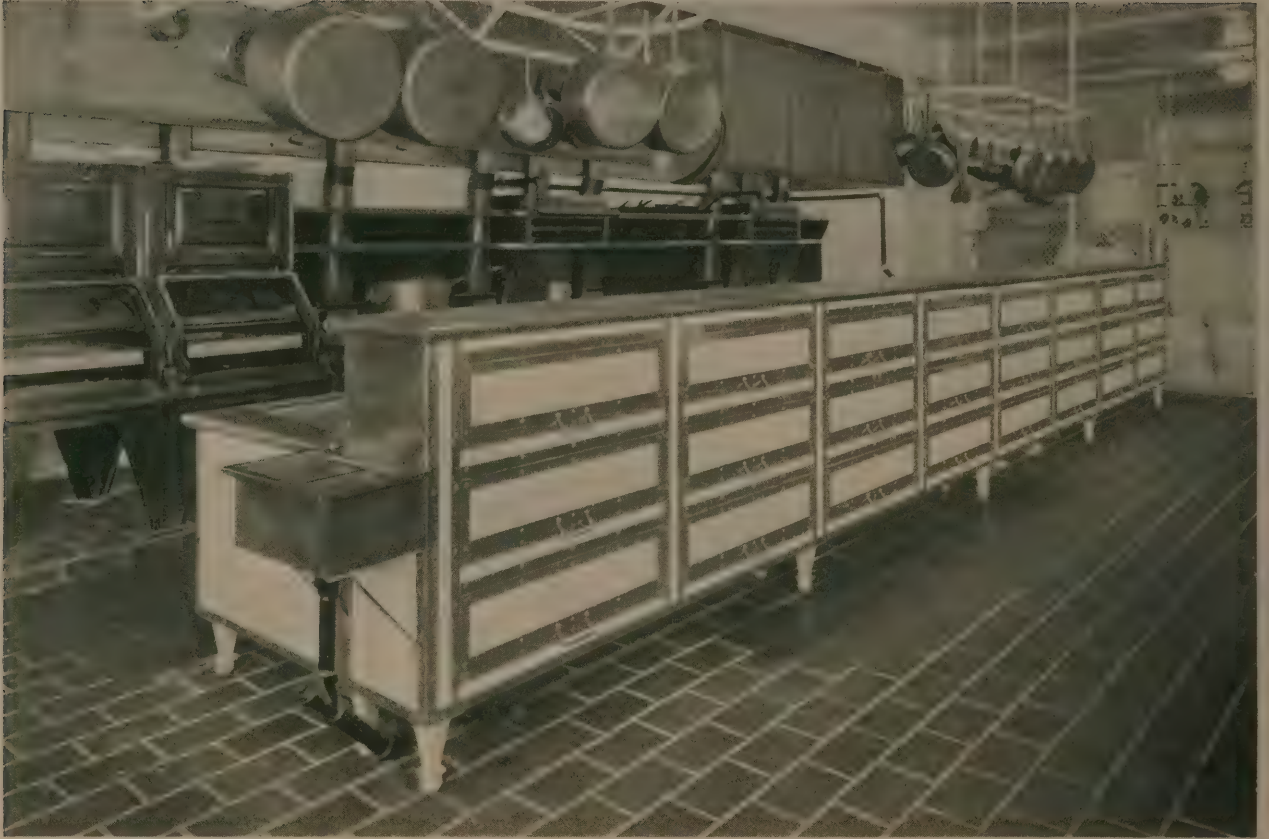
Additional Views of Kitchen, Girard College, Philadelphia, Pa.



Bake Shop



Employees' Cafeteria



Main Kitchen of the Standard Club, Chicago



Another View of the Kitchen of the Standard Club, Chicago



Main Kitchen, Hotel Duluth, Duluth, Minn.

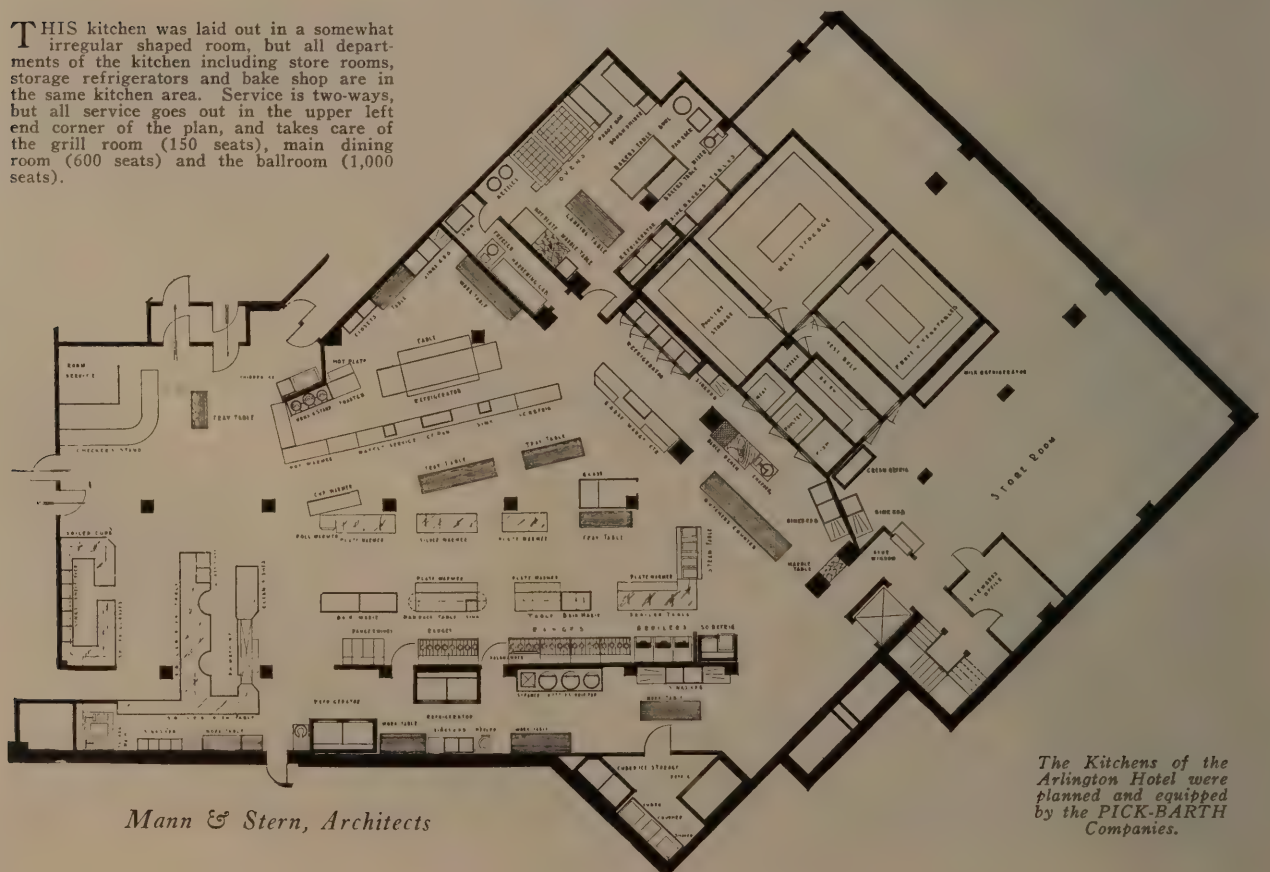


Main Kitchen. The Concourse Plaza, New York



Kitchen of the Arlington Hotel, Hot Springs, Ark.

THIS kitchen was laid out in a somewhat irregular shaped room, but all departments of the kitchen including store rooms, storage refrigerators and bake shop are in the same kitchen area. Service is two-ways, but all service goes out in the upper left end corner of the plan, and takes care of the grill room (150 seats), main dining room (600 seats) and the ballroom (1,000 seats).



Mann & Stern, Architects

The Kitchens of the
Arlington Hotel were
planned and equipped
by the PICK-BARTH
Companies.

The oyster bar adjoins the cold meat counter and should be provided with a top with openings above a space where barrels or cans are placed to collect the empty shells. An ice box back of the counter should be metal lined and have a series of metal trays to carry the opened clams and oysters ready to serve. The front of the counter is an insulated crushed ice box with a lift cover. A container for unopened oysters and a small sink are also necessities.

Breakfast and Coffee Pantry, and Pastry and Ice Cream Service

The pantry counters and pastry counters also belong together, and from here are served all varieties of pastry, ice cream, hot drinks and cold drinks. Here, too, are prepared the breakfast services of toast and eggs, hot cakes and waffles. The equipment necessary in addition to serving counters are ample ice cream cabinets, coffee urns and breakfast grill and sometimes a soda fountain. The coffee urns should be supported on a metal top stand with an enclosed cup warmer below.

It would be impossible to give too much attention to coffee and coffee making equipment as there is many a hotel which can trace a large share of its restaurants' success to this single item. In times past the finest urn equipment consisted of highly developed two- or three-urn batteries, but of recent years the combination urn has forged steadily to the front in efficiency and popularity. The new "Petersen" Combination Urn is now unquestionably the leading coffee maker of this kind now on the market.

The construction of the ice cream cabinet should



Service Refrigerators, Hotel Half Moon, Coney Island, N. Y.



Service Refrigerators, Hotel Benj. Franklin, Philadelphia



Service Refrigerators, Hotel Mayflower, Washington, D. C.

be suitable for mechanical refrigeration. The walls should be of metal, and the covers also of heavy metal insulated and made in sections.

Refrigerators

The storage refrigerator can scarcely be made too large. Expense may limit their size, but it should never cause their quality to be slighted. Their size will be governed by the location and the facility for speedy and frequent deliveries.

The structure of the box depends upon individual conditions and preferences. When the lease is long or the proprietor owns the building, nothing is better than cork and cement construction. This consists of an interior wall of a double layer of 2-inch cork-board laid in cork cement so as to break all joints. This is coated on both sides with Portland cement. The interior finish should be either cement (preferably nonporous) or tile. Galvanized steel may also be used. This construction, however, is generally used only in the large storage refrigerators and in connection with mechanical refrigeration.

The most common construction is the sectional wood refrigerator which can be taken down and put up again if the occasion requires. The best insulation in these cooling rooms is compressed cork-board; ground cork and mineral wool are used only in the cheaper boxes. Walls should be at least 6 inches in thickness and consist of two thicknesses of lumber, four thicknesses of insulating paper and 4 inches of corkboard. Spruce forms the best lumber for interiors, except for the floor, which should be of oak. Ash or oak, painted or varnished, are generally used for exteriors. The boxes are usually lined with galvanized steel.

Refrigeration is based upon air circulation. To insure dry interiors, flues in which the warm air can rise and the cold air fall must be a part of any

A long, low-profile storage unit with multiple shelves and compartments, likely for film or documents, in a dark room. The unit is filled with various items, possibly film canisters or documents, and has a series of small, dark, rectangular openings along its front edge.

for special types of refrigerators which need unusual refrigeration and construction. In any event, a competent refrigeration engineer is essential to a successful result.

Very little consideration is given today to refrigeration by means of ice, as it is far more economical and vastly more clean to use artificial refrigeration. Ammonia and carbon-dioxide and sulphur dioxide plants are all common and each has its advantages. These machines are rated on their capacity to produce ice in a twenty-four hour a day run, but as a machine is generally operated only about sixteen or eighteen hours out of the twenty-four, many of too small a tonnage have been installed.

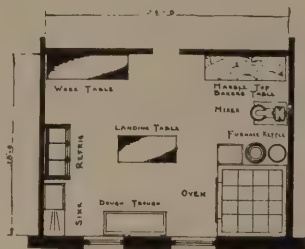
Especially in large kitchens there may be a need

This floor plan illustrates the layout of the ship's galley, which is divided into several functional zones. At the top, a long storage area contains shelves for 'SEA FOOD', 'MEATS' (with 'HANG BACON' above), 'POULTRY', 'VEGETABLES', 'DAIRY' (with 'BUTTER' and 'CHEESE' below), and 'BOTTEN CHEESE'. Below this is the 'MAIN STORAGE REFRIGERATOR' and a 'VESTIBULE'. The central area features the 'STEWARDS OFFICE' and the 'MAIN STORAGE ROOM', which is filled with 'STORAGE SHELVES' and 'SHELVES & BINS'. To the left of the office is a 'REFRIG' and 'CANNED GOODS STORAGE'. A 'CORRIDOR' runs through the middle. On the left side, there is a 'DUTCHER SHOP' with a 'SINK', 'TABLE', and 'REFRIG', and a 'POULTRY ROOM' with a 'TABLE' and 'SINK'. At the bottom, the 'VEG PREP ROOM' and 'FISH PREP ROOM' are shown, both with 'SINK' and 'TABLE'. The 'ICE CREAM ROOM' contains a 'REFRIG', 'TABLE', and 'CABINET'. The 'CHINA STORAGE' area is on the right, with 'SHELVES'. Other areas include 'HARDWARE ROOM' and 'FREEZER'. The plan is marked with numbers 1 through 12 at various points.

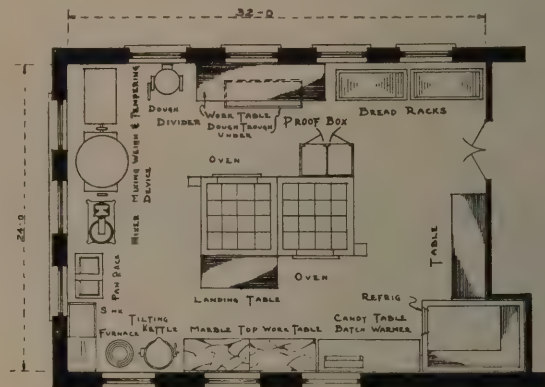
Often the architectural plan of the hotel does not provide sufficient space for Service Kitchen, Store Rooms and Preparation Rooms to be a part of the main kitchen. In this case it is necessary to place these various departments in another part of the building. While this no doubt increases the overhead, the increased revenue from the rental space of the stores and shops designed on the ground floor space may more than compensate for it. A detached unit of preparation pantries, store rooms and storage refrigerators is shown on the accompanying plan. The butcher shop, fish and poultry preparation rooms, as well as vegetable preparation room and ice cream making department, can be successfully operated and taken care of with an arrangement similar to that illustrated. Although not so shown on this plan, the bake shop is an independent unit and therefore may also be detached from the main kitchen because the bakery is usually operated in the earlier hours of the morning and is not as a rule included in the service of the kitchen except in smaller installations where the baker or his assistant acts as pantry man.

Typical Bake Shops of Various Sizes

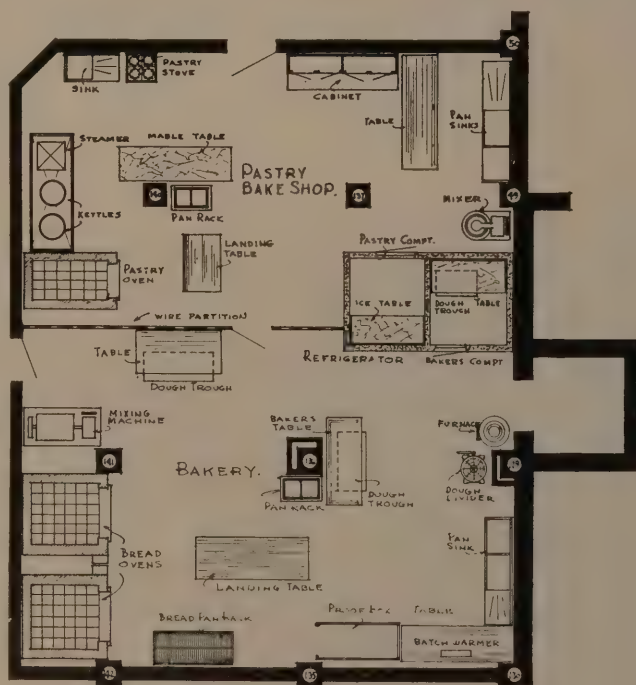
WHEREAS in years gone by the hotel operator paid little or no attention to his bakery goods, the trend of modern times finds a complete bake shop in nearly every hotel, regardless of its size. Depending on outside sources of supply, and frequently figuring that the bake shop could not operate economically, the operator often found that his patronage was falling away and that the progressive hotel which had its own bakery and was advertising its bakery goods as products of the house was attracting public attention and patronage.



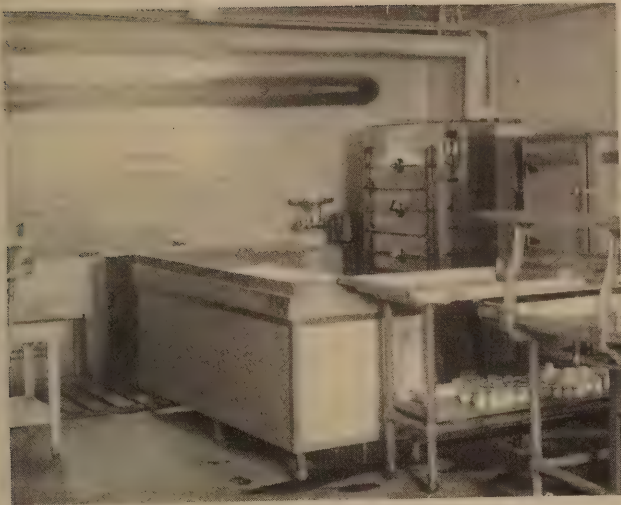
In the above plan (area 432 sq. ft.) we find the essential requisites of the small but complete bakery. Such equipment should consist of a bake oven heated by either coal, gas, or electricity, a proof box, gas plate, cake and bread mixing machine of eighty-quart capacity, pan-washing sink, refrigerator and necessary work tables, consisting of a table with bins for flour storage and a smooth whitewood or poplar top on which the dough can be worked, and landing table in front of the oven with a heavy sectional wood top to withstand the heat of the bread and cake pans when they are removed from the oven, and a marble top icing table for pastry work with suitable arrangement of drawers for the storage of various ingredients used in the pastry work.



This plan (area 768 sq. ft.) illustrates a larger bake shop where the ovens are placed side by side but with the fronts reversed. This divides the operations with one side for pastry baking and the other for bread and roll baking. Each side of the room is complete with its machines and work tables and permits the performance of both divisions of the bake shop without undue interference. The pastry shop has its own batter mixing machines, sinks, kettle for soft pie fillings and custards, marble top work tables, icing table and storage refrigerator. The bread bakery is complete with its power dough mixer, flour bins, automatic flour hoist, sifter and weighing hopper; dough divider for rolls and bins and work tables.



In the plan at the left (area 2091 sq. ft.) we find a similar arrangement or division of bread shop from pastry shop, but more completely equipped with a larger number of machines, mixers, kettles and working tables, to permit a larger crew of men to work, thus meeting the greater demands of the large hotel. Separate rooms shown on this layout are oftentimes desirable to control different air temperatures for the better performance of the two departments. In connection with the pastry shop the up-to-date kitchen has an adjacent room for ice cream making. The equipment consisting of a brine freezer, ice cream can washing sink, steam kettles, furnace and work tables with ice cream mould cabinet space. Hardening and form cabinet refrigerators are installed in connection with this work to hold over the product.



Bake Shop, Kentwood Arms Hotel, Springfield, Mo.

In purchasing the machine, the approval of the kitchen engineer should be secured as a safeguard against inadequate capacity.

Store Rooms

Supplies should be received directly into the storeroom and move through the various departments with as little re-handling as possible. The storeroom and storage refrigerator may be located either on the same floor as the kitchen or in the basement directly beneath the supply entrance, with stairs and elevator for handling bulky items. Store-rooms should be provided with uniform shelving of metal or hardwood. Convenient delivery platforms should be provided for cases and barrel goods to prevent cluttering up the kitchen or hindering the work of other employees when deliveries are made. Basements offer ideal locations for heavy storage of canned goods and vegetables and storerooms should be built for this class of merchandise separate from those necessary for the daily and perishable foods. In the larger hotels special equipment is frequently installed for facilitating the storing and handling of foods—especially in bulk. An example of such a department is that of the Pal-

Bake Shop and Ice Cream Dept., Ritz Towers, New York
mer House, Chicago, which is shown on page 365.

The Bake Shop

Back of or adjacent to the pastry counter is the bake shop. As a rule it is divided into two departments, one of which is used for making bread, rolls and biscuits, while the other prepares the pastries, cakes and cookies. The principal fixture, naturally, is the bake oven, which may be heated by coal, coke, gas or electricity, but should always be supplied with tile decks. In recent installations the electric bake oven seems to be preferred because of the perfect control of temperature and the ease of operation, although gas ovens are also very widely used. The other essential equipment consists of work tables, marble-top bakers' table, landing table, dough trough, candy furnace, tilting pastry kettle, mixing machines, proof boxes, sinks and a refrigerator. In the larger places a dough mixer is also provided.

The three model plans shown on the opposite page give a good idea of the arrangement for different sizes of bake shops and also illustrate the method of organizing the department into two separate divisions for bread and pastry baking.



Bake Shop, Hotel Manchester, Middletown, Ohio



Bake Shop, Hotel Mayflower, Washington, D. C.

Typical Plans of Dishwashing and Silver and Glass Washing Pantries

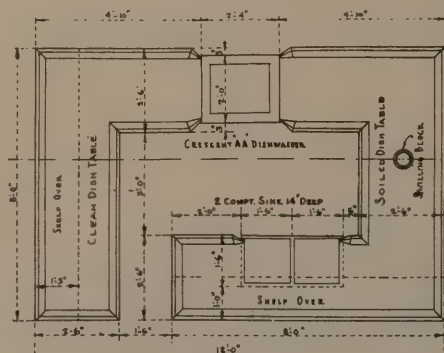
THE plans shown here represent various types of departments of from small to exceedingly large capacity.

Plan No. 1 illustrates the most simple and universal form of general dish, silver and glass washing department used by a great number of small restaurants, lunch rooms and cafeterias throughout the country. The machine shown is a single rack type machine, wherein one rack of dishes is washed at each operation and the maximum capacity is from three to four thousand pieces per hour. The separate sink set into the table is used as a silver and glass washing sink and for general utility purposes.

Plan No. 2 shows the double department having each one of its units suitably increased in size and capacity. Both machines are of the automatic conveyor type, one machine for glass washing and one machine for dish and silver washing, together with a two compartment sink for silverware and general utility purposes. These machines have a capacity of about six to seven thousand dishes per hour and two thousand glasses per hour.

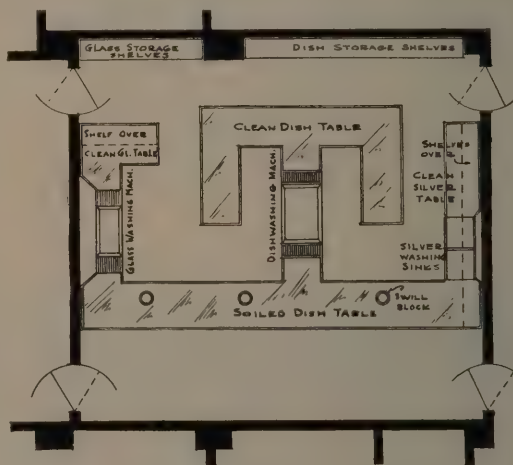
In Plan No. 3 we have a large dishwashing department with separate departments for glass washing and silver cleaning. A large dishwashing machine is used with automatic conveyor type belt, using either racks or the belt itself for conveying dishes. It has a capacity of from twelve to fifteen thousand pieces per hour and, in order to handle this tremendous volume, several swilling or scrapping stations are included as shown on the plan. In Plan No. 3 we have a separate room for the cleaning and polishing of silverware with buffing machine, burnishing machine and storage cabinets.

The planning of dishwashing pantries is one of the most exacting and vital parts of kitchen engineering, and there have been hundreds of instances where a poorly planned installation has literally ruined the operation of the entire kitchen. The problem is difficult enough to handle in regular shaped spaces, such as illustrated here, but it is frequently the case that an irregularly shaped room must be used, which adds many complications. Even in the case of a small and simple department a trained kitchen engineer is indispensable.



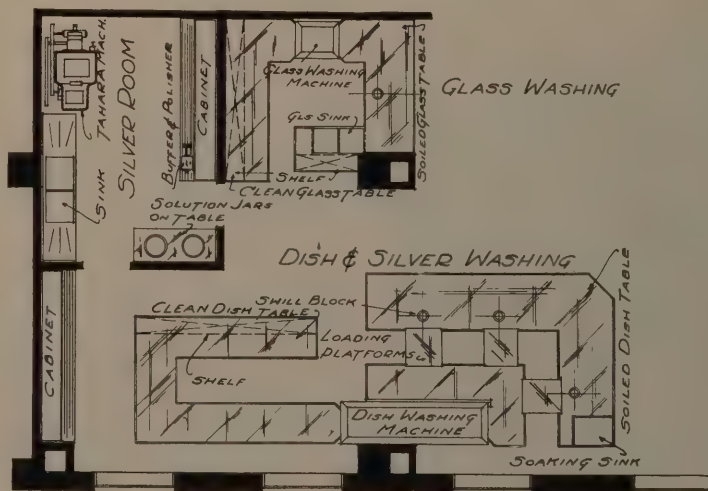
Plan No. 1

Simple dishwashing pantry with rack-type machine. Maximum capacity about 3000 to 4000 pieces per hour.



Plan No. 2

Double machine department—one machine for glass washing. Both machines of the automatic conveyor type, with separate sink for silver washing. Maximum capacity about 6000 to 7000 dishes and 2000 glasses per hour from the machines (silverware sinks extra). Both machines can be used for dishes if necessary.

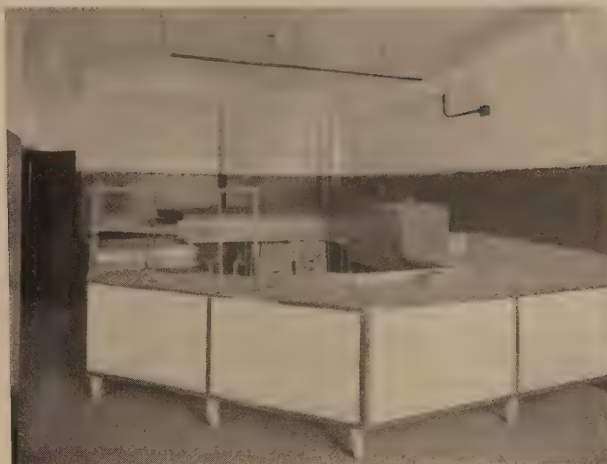


Plan No. 3

A large dishwashing department with automatic conveyor type machine. Maximum capacity 12,000 to 15,000 pieces per hour. There are separate sections of glass washing and silver cleaning.



Hotel Mayflower, New York



Hotel Ft. Armstrong, Rock Island, Ill.

Dishwashing Pantry

The dishwashing department is a subject of considerable discussion and there is wide variation in its treatment. Great care has to be exercised in planning this pantry, especially where several dining rooms are to be centrally served. A typical complete outfit will include one or more large dishwashing machines for handling china and hollowware and a small machine for glassware only. Soaking sinks and silver and glass sinks should also be provided as well as the machine. These units must be built into a pantry consisting of a set of tables in the form of a hollow square preferably accessible from all sides. When space does not permit this, the machines are generally lined up along a wall with the tables extending from each end and returning at right angles to the dishwashers.

There are several standard makes of dishwashers on the market, all of which belong to the forced spray variety. The dishes are packed in racks or



Silver Cleaning Room, Wade Park Manor, Cleveland, O.

placed upon conveyors which are carried through the machine in such a way that first soapy water and then rinse water is thrown over them by means of centrifugal pumps. Nearly all of the larger machines either move the dish rack through on a chain conveyor or else carry the dishes through the machine on a conveyor belt. The best machines have copper or monel jackets mounted upon heavy tanks. Some carry pairs of centrifugal pumps to force the water through revolving spray arms while others have stationary slots to throw the water on the dishes from all directions.

The dishwasher is no more important than the tables which surround it—without them, the machine alone would be useless. Their shape and arrangement constitutes one of the very most ticklish engineering problems in the whole kitchen. An unskillful arrangement will often reduce the machine's output so seriously as to tie up the operation of the whole kitchen and in addition may cause very excessive labor costs (see page 368). The tables



Hotel Bismarck, Chicago



Hotel Loraine, Madison, Wis.



Main Kitchen, Sheridan Plaza Hotel, Chicago

themselves are in reality shallow sinks with sides about three inches deep. These tables are all pitched to drain perfectly, the clean table draining back into dishwasher and the soiled table draining away from it. The soiled table is provided with scraping blocks fitted to holes in the table, beneath which are placed garbage cans or a garbage chute. In this latter instance it carries the garbage to a raking pit where water is removed and any lost silver is recovered after which the garbage may be put in cans to be stored in a refrigerator till removed or incinerated. The tables, whether made of monel metal or iron, should be at least fourteen gauge metal with strut braces beneath and mounted on a substantial iron pipe stand. Shelves beneath the tables are utilized for holding dish racks when not in use and the clean tables usually have metal shelves above to hold the stacks of clean china, silverware or glassware.

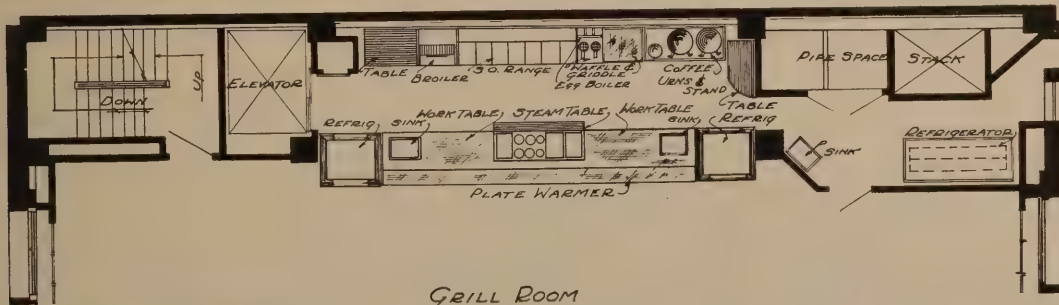
Many large hotels find it profitable to have the dishwashing pantry for the entire number of dining rooms centrally located and to convey the dishes to and from this pantry by belt conveyers carrying metal dish baskets. This serves the double purpose of creating less confusion in the kitchen by minimizing the number of bus boys, and also is far more economical from a labor standpoint than would be the case with a separate dish pantry located in each room. A general exception to this rule is that a separate dish pantry for banquet or lunchroom dishes should be maintained, so that the dishes may be kept in suitable dish heaters especially for that purpose and not mingled with the tableware of the main dining room.

Adjacent to the dish pantry should be the silver cleaning room, surrounded by wire mesh partitions and supplied with large burnishing machine, sinks and tables, as well as cabinets generally made of metal and provided with locks for safeguarding this valuable supply. By proper care silver is now kept with all its original lustre as long as the plating lasts.

Grill Kitchens

The service of food from a grill kitchen opening into the dining room is a special problem which should be approached with great care and foresight as there are many serious troubles which can arise if the matter is not expertly handled. At best, the space is more cramped than is at all normal in a kitchen, and the arrangement must therefore be worked out with extreme skill to give absolute assurance that the cooking facilities are really sufficient to handle the load placed upon them during their busiest periods of service. Naturally it is essential to have any unsightly or noisy departments segregated from the open kitchen, but this must be done without endangering the rapidity of service in any way and without causing congestion at any points. Perhaps the best kind of an arrangement is the type shown on page 371, where the grill kitchen is designed only for a limited amount of preparation, with the main preparation and general service coming from the main kitchen.

In view of the delicate nature of the problem, we certainly recommend the consulting of an experienced kitchen engineer at the earliest possible stage in the planning.



GRILL ROOM



Grill Kitchen of the Standard Club Chicago, Ill.

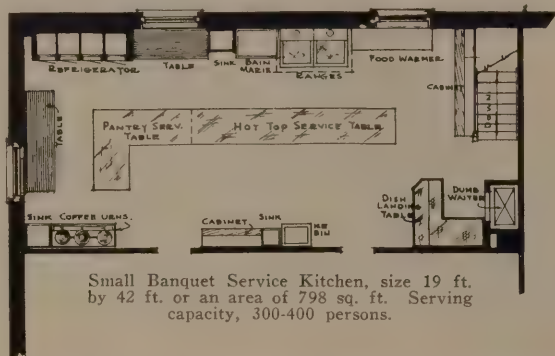
THIS Grill Room Kitchen illustrates a type of service used in nearly all men's clubs and in a great many hotels throughout the country. The grill kitchen being entirely open to the public vision requires that the equipment be constructed of the very highest grade of material and workmanship. All the equipment in this kitchen is designed for food service only, and the main preparation work is done in the main kitchen and brought up to this kitchen for serving.

The kitchens of the Standard Club were completely planned and equipped by the PICK-BARTH Companies.

Albert Kahn, Architect

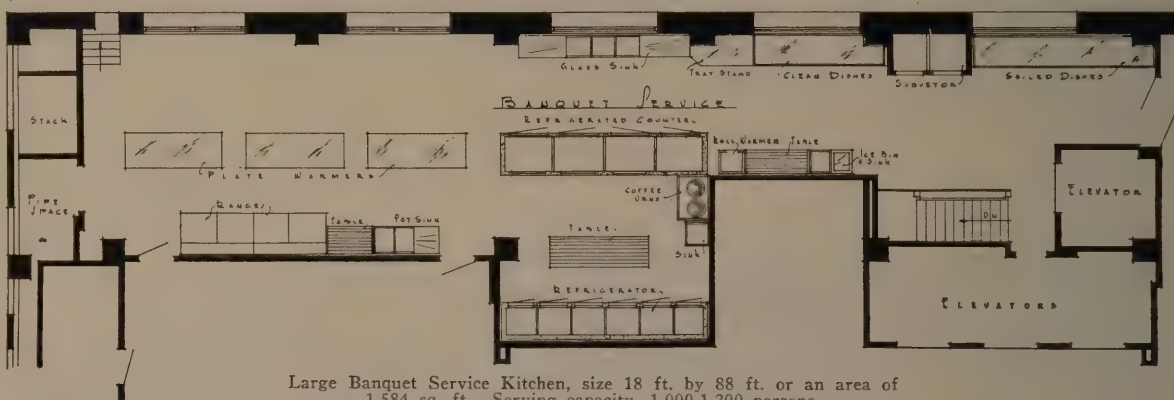
Typical Banquet Service Kitchens

BANQUET service may be carried on either from the main kitchen or a special banquet service department depending upon the size of the hotel and at times upon peculiar conditions. Small hotels, in serving from the main kitchen, often require only a small pantry for the banquet room, and even this may be omitted where the latter is adjacent to the main kitchen. The two plans here show Banquet service kitchens of small and large capacity and may be considered fairly representative types. As the banquet service is uniform in its courses, large storage space is necessary for quantity storage and set ups when the moment of service arrives. Hot Bain



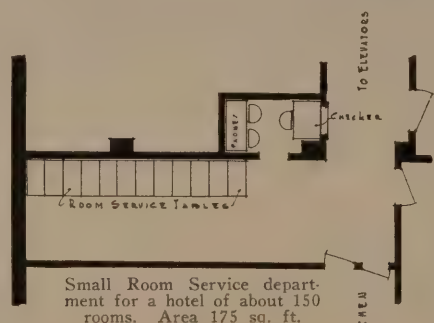
Small Banquet Service Kitchen, size 19 ft. by 42 ft. or an area of 798 sq. ft. Serving capacity, 300-400 persons.

Maries and hot service tables where quick set ups can be made with plenty of aisle space for waiters to circulate around the tables are essential. A properly designed kitchen, adequate refrigerator space with shelves spaced closely together to hold a great number of cold plate set ups together with coffee urns of large capacity and stations to set up ice creams and desserts complete the requirements of this service. In connection with the removal of soiled dishes it is necessary to design extra large dish tables and racks to hold the dishes until after the service is through, as it would be impossible to wash and place the chinaware back in operation during the banquet service. Many installations include automatic dish subveying machines which quickly and efficiently remove the dishes from the banquet serving kitchen to a dish washing pantry below.

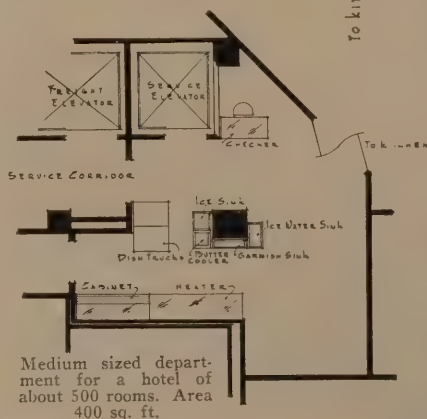


Large Banquet Service Kitchen, size 18 ft. by 88 ft. or an area of 1,584 sq. ft. Serving capacity, 1,000-1,200 persons.

Typical Room Service Departments

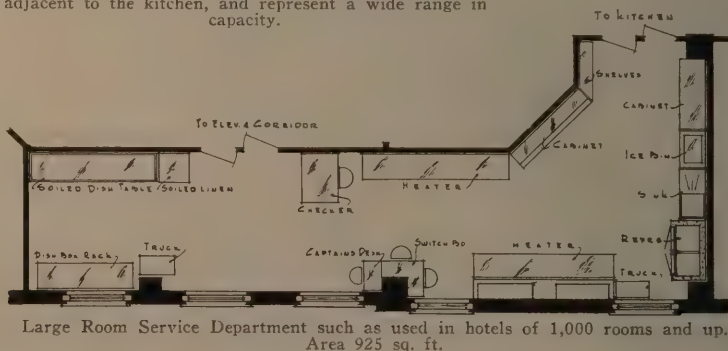


Small Room Service department for a hotel of about 150 rooms. Area 175 sq. ft.



Medium sized department for a hotel of about 500 rooms. Area 400 sq. ft.

Room Service requirements vary even more than does the Banquet Service. In the smaller houses often only a telephone operator is required to receive the orders from the rooms and the service is usually performed by the regular Dining Room waiters. In the larger hotels special room service waiters are employed who work under the directions of a captain who has charge of the department. In the larger hotels the room service requirements take the form of suitable tables and set ups for the room service plate heaters, condiments, refrigerators, ice bins, linen cabinets and special service heaters as shown in the accompanying cuts. The three plans shown here show departments located adjacent to the kitchen, and represent a wide range in capacity.



Large Room Service Department such as used in hotels of 1,000 rooms and up. Area 925 sq. ft.



Banquet Service Kitchen, Palmer House, Chicago

Banquet Service Kitchens

The banquet service kitchen should consist primarily of table space with suitable refrigerators and hot service tables to insure proper service. This room should be provided with a battery of urns, a large refrigerator and facilities for washing the dishes or for conveying them to the main dish pantry. All available wall and floor space should be utilized for shelving and tables. The tables themselves should be supplied with wide shelves beneath and in many cases should be heated by steam coils. Some of the larger hotels also include broilers and ranges, although this depends much upon the banquet menu. For smaller places this is not deemed essential, and the entire food preparation is completed in the main kitchen.

Garbage Disposal

One of the most difficult problems to solve is the sanitary and satisfactory disposal of garbage. As described in connection with the dish pantry, a garbage chute leading to a raking pit adjacent to a garbage freezer serves the double purpose of salvaging lost silver and immediately removing all of the odors connected with food refuse from the dish tables from the kitchen. However, this is only possible where a basement or sub-basement is located beneath the dish pantry and relatively close to freight elevators. If chutes are used, it should be made possible to flush them thoroughly with live steam and hot water to keep them in a sanitary condition. Where this is not possible, it becomes necessary to find some other means for garbage dis-



Banquet Kitchen, Hotel Benj. Franklin, Philadelphia, Pa.



Room Service, Sheridan Plaza Hotel, Chicago

posal, and in addition to the garbage from the dish tables there is refuse from the pantries, poultry rooms, garde manger counter and bake shop, etc., which amounts to a considerable quantity in the course of a day. Incineration is one of the most rapid and satisfactory means of handling this garbage and is generally accomplished by an incinerator located apart from all other equipment with just enough gas burners to supply a flame for igniting the garbage. Owing to the amount of grease which is always present, the heat from burning garbage is terrific, and it is necessary to have a separate flue leading to the highest point of the building and thoroughly insulated from any other part of the structure. Where these precautions have not been taken, disastrous fires have resulted, and if the pipe from the incinerator to the flue is not made very short and of very heavy material no amount of covering will protect it or surrounding articles from the heat and the flue will very quickly burn out. In the larger hotels this incinerator is built in the form of a brick oven entirely encased with 6 inches or more of fire brick, and this acts as an added protection against the heat.

Steam Requirements

Much argument has arisen over the relative horsepower required for the operation of various pieces of equipment in kitchens, and, owing to the fact that they are not all used at the same time and that radiation is extremely different in different locations, it is impossible to do otherwise than approximate the capacity that is required. In figuring the horsepower of boilers these figures may be assumed to be as near the code as possible: a 30-gallon jacket-kettle, a 30-gallon coffee urn, 70 lineal feet of enclosed or open $\frac{3}{4}$ -inch pipe or one open jet such as used in sectional steamers are each approximately equivalent to one horsepower. The minimum average of steam pressure which should be considered at each fixture should be 35 pounds.

To show how this works out in individual cases, let us refer you to the small model kitchen shown

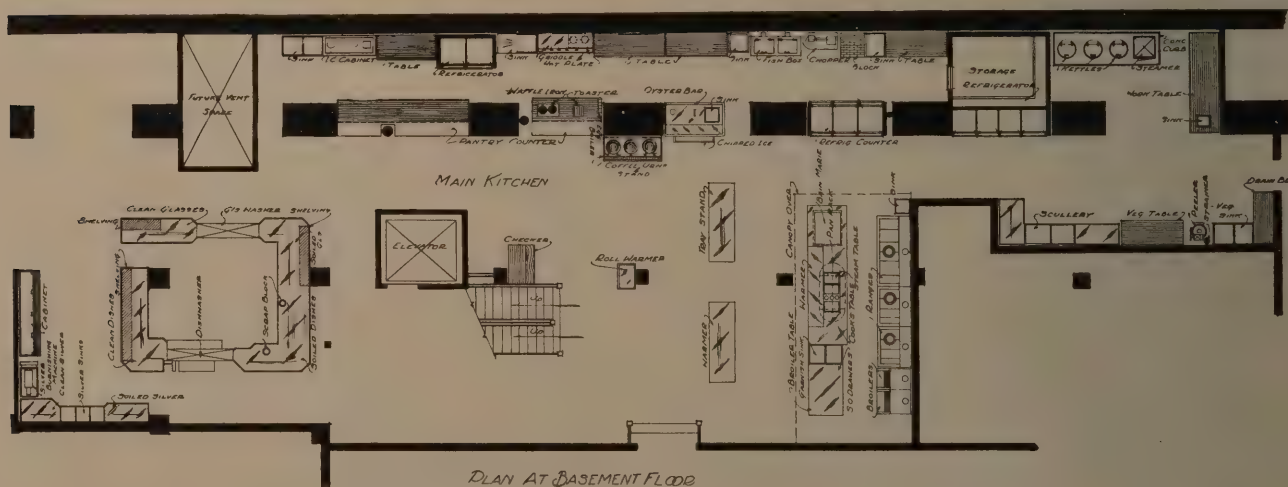
on page 338. Here the actual requirement if all the fixtures were operating at once would be somewhat in excess of 7 horsepower. As these fixtures are seldom all used at the same time, nor at their full capacity, a boiler of $4\frac{1}{2}$ to 5 horsepower will be sufficient. Figured by the same method, the model kitchen on page 340, with a maximum requirement of 12 horsepower would need an 8 to 10 horsepower boiler, and the large model kitchen on page 343 with 25 horsepower total consumption should have a 15-20 horsepower boiler.

These figures are given only for general information, however, and the only safe way to handle this rather complex problem is to consult a capable kitchen engineer.

Hot Water Supply

One of the features the importance of which is often under-estimated by contractors and owners in the equipping of a hotel is the amount of hot water which will be required. Where all the equipment is heated by high-pressure steam it is possible to reduce the capacity of the hot water boiler, due to the fact that steam operates with great rapidity and it is even possible to admit cold water to steam tables, coffee urns, etc., and still have it heated with sufficient rapidity not to retard the operation of the kitchen as a whole. Places where hot water is especially needed and used in large quantities are the dishwashing pantry, silver-cleaning pantry, pot sinks, open bain maries and stock kettles. The minimum size of a hot water boiler for a 500-room hotel should be 1,500 gallons, and if the use of the dining room is above the average this should be increased to 2,000. The absence of an adequate hot water supply has caused more dissatisfaction with dishwashing and other cleaning machines than any other one factor, and whereas the larger boiler requires a little additional expense at the start, it is money well spent in the end.

It should be understood that for satisfactory operation, hot water should be delivered in the kitchen at a temperature of not less than 180° F.

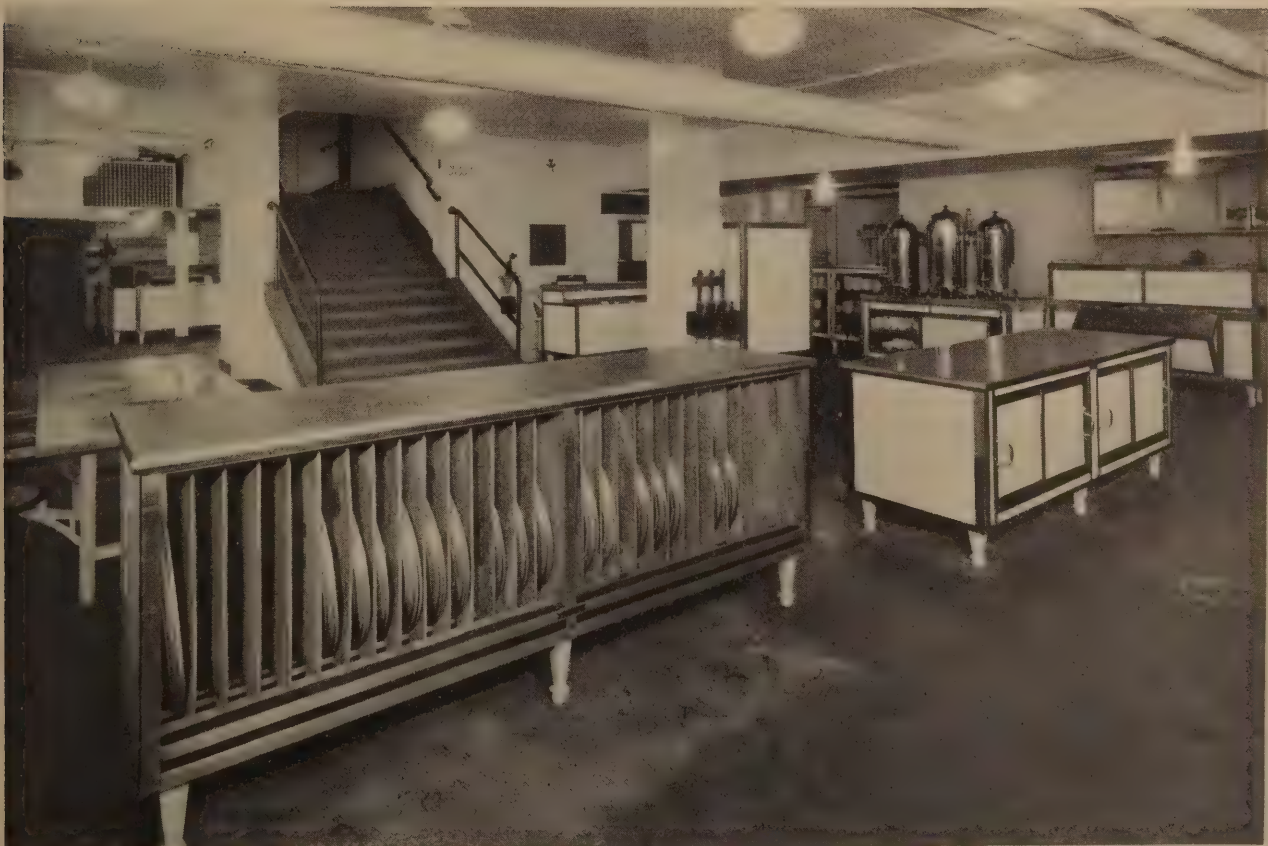


Plan of the Kitchen of the Pfister Hotel, Milwaukee, Wis. (See following page)

This kitchen plan shows service only and does not include store rooms or bake shop nor the vegetable preparation departments complete. This kitchen is in the basement and the service to the dining rooms and coffee shop upstairs is up a double flight of stairs from the center of the kitchen.



Kitchen of the Pfister Hotel, Milwaukee, Wis.



Kitchen of the Pfister Hotel, Milwaukee, Wis.

Perhaps it will be helpful here to note that in the small model kitchen shown on page 338, the hot water supply should be provided by a boiler of about 750 gallons per hour capacity, while the model kitchens on pages 340 and 343 would need 1,500 gallons and from 2,000 to 2,500 gallons per hour respectively.

Gas and Electric Requirements

As this is a matter which varies very greatly according to many kinds of factors, it should be figured upon for the individual job with the advice of the kitchen engineer. For a general understanding of the methods by which these two things are figured, refer to the discussion of the three model kitchens on pages 338, 340 and 343.

Drainage

The drainage for a kitchen should be given careful attention. The entire system should be run through a grease trap before entering the main sewer, and individual water-cooled grease traps should be provided for the dishwashing machines and pot sinks. Particular attention should be paid to the water from the vegetable peelers on account of the large amount of sediment from this machine. The strainer usually provided with the equipment will remove a large portion of the coarser peelings, but this drain should have a short run and should be given a very good pitch until it reaches the main sewer where there will be sufficient flow at all times to keep it from clogging.

Floors, Walls and Ceilings

It is necessary that the kitchen floor and walls should receive a word of mention. The flooring

most generally liked is of red quarry tile separated by $\frac{3}{4}$ inch binder strips. Terrazo is also desirable. Cement floors are undesirable for various reasons. Tile or white enamel brick walls are best, with painted hard plaster a second choice. The floor should be arranged to permit thorough flushing, and should be provided with drains at intervals to secure easy and quick drainage.

The question of floor reinforcement and of heat insulation of either walls or floors is one which frequently demands attention but it is not necessary to discuss it here as it is a matter which the engineer will bring up when necessary.

As to ceiling heights, 18 feet is about the ideal condition and as low as 14 feet is practical. Lower ceilings are less desirable and cause various complications. Architects will do well to secure the kitchen engineer's advice before deciding on this point.

Lighting and Ventilation

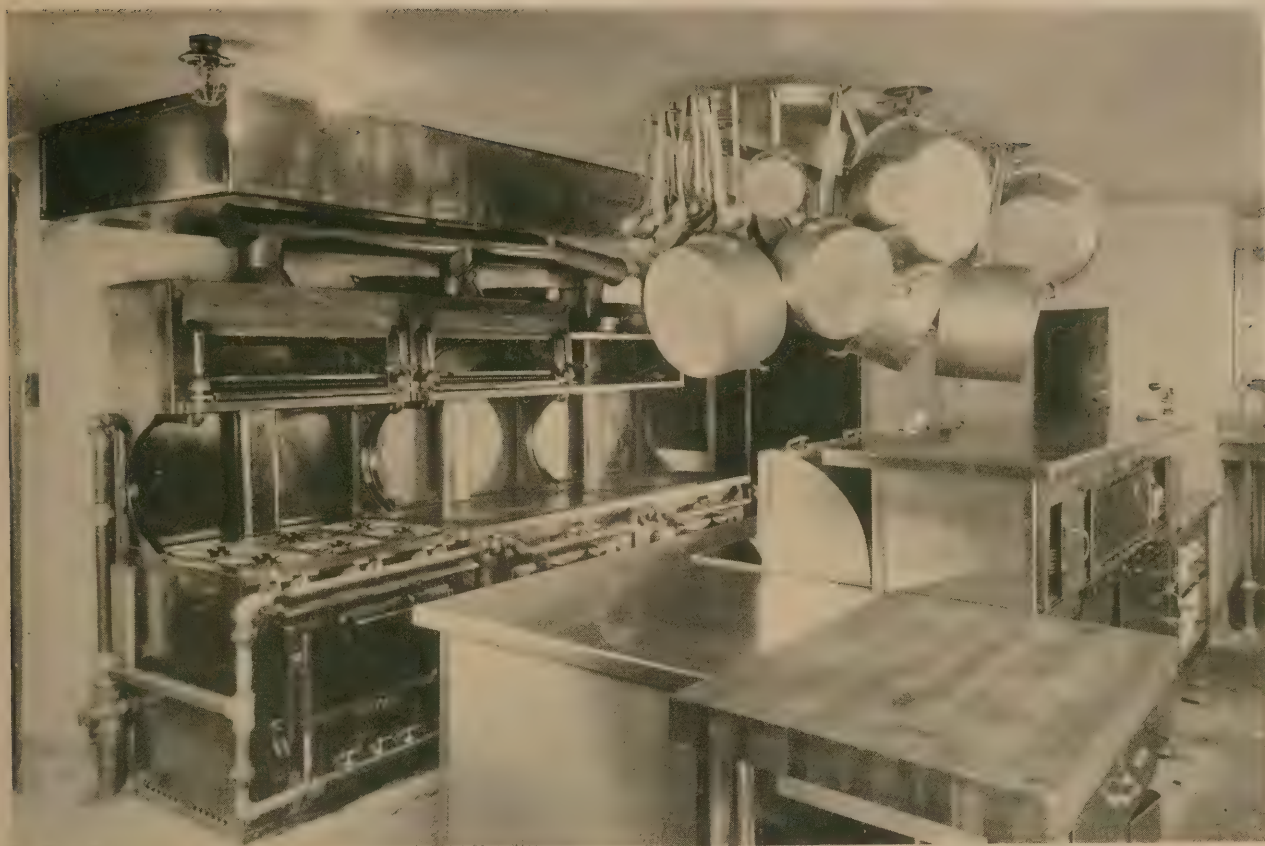
Natural lighting is always desirable and sometimes local laws make it compulsory. Kitchen windows should have at least four feet clearance beneath the window apron.

No matter how small the room, the removal of air should be figured in an accurate manner, and fans of suitable size with ducts and vents properly located should be provided to insure clean, wholesome air at all times. In crowded city locations this often entails considerable expense, but without it any kitchen is a failure. Natural ventilation is fine, but any kitchen requires some assistance to remove the heat and fumes as fast as they are created. This is a case where the kitchen specialist and the ventilating engineer must both collaborate with the architect to bring about the desired conditions.

(Continued on page 387)



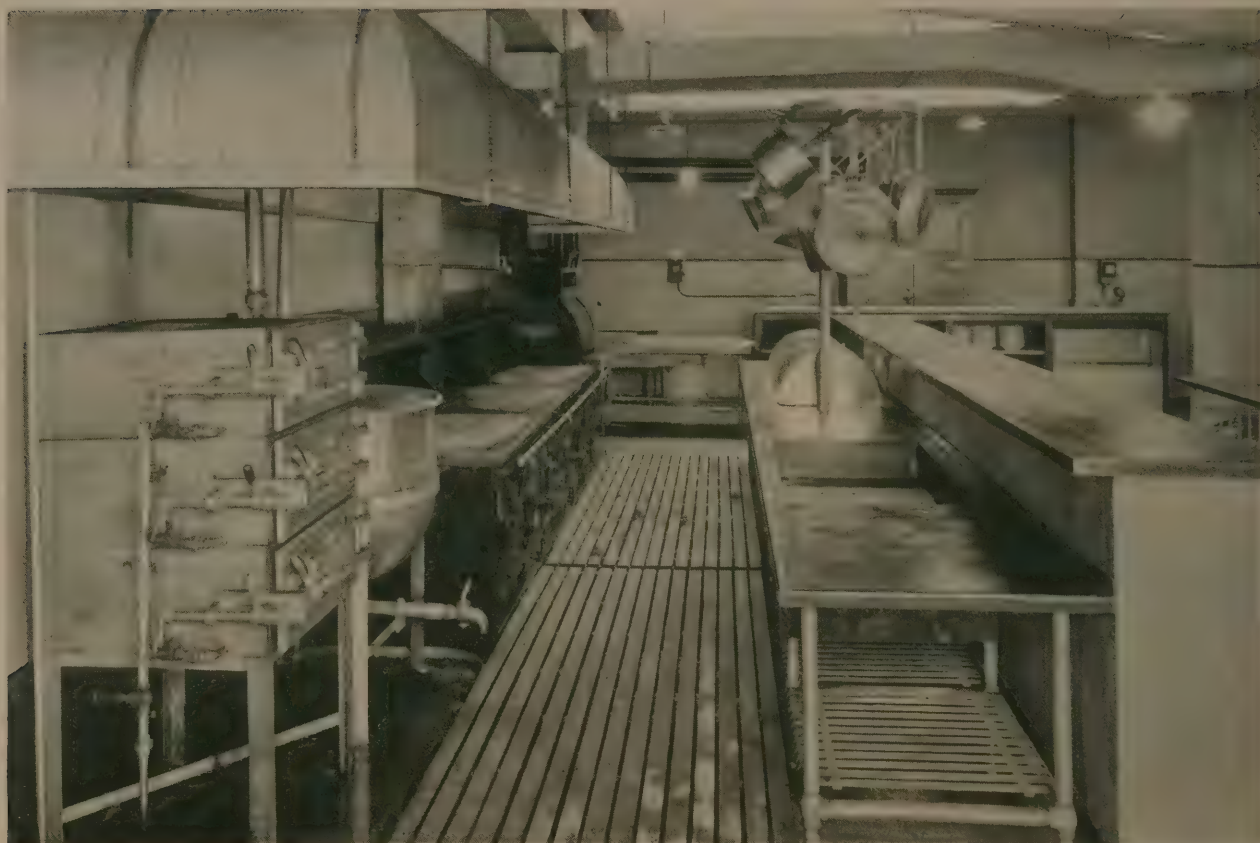
Main Kitchen, Hotel Ritz-Carlton, Boston, Mass.



Range Division, Hotel Fountain Square, Cincinnati, O.



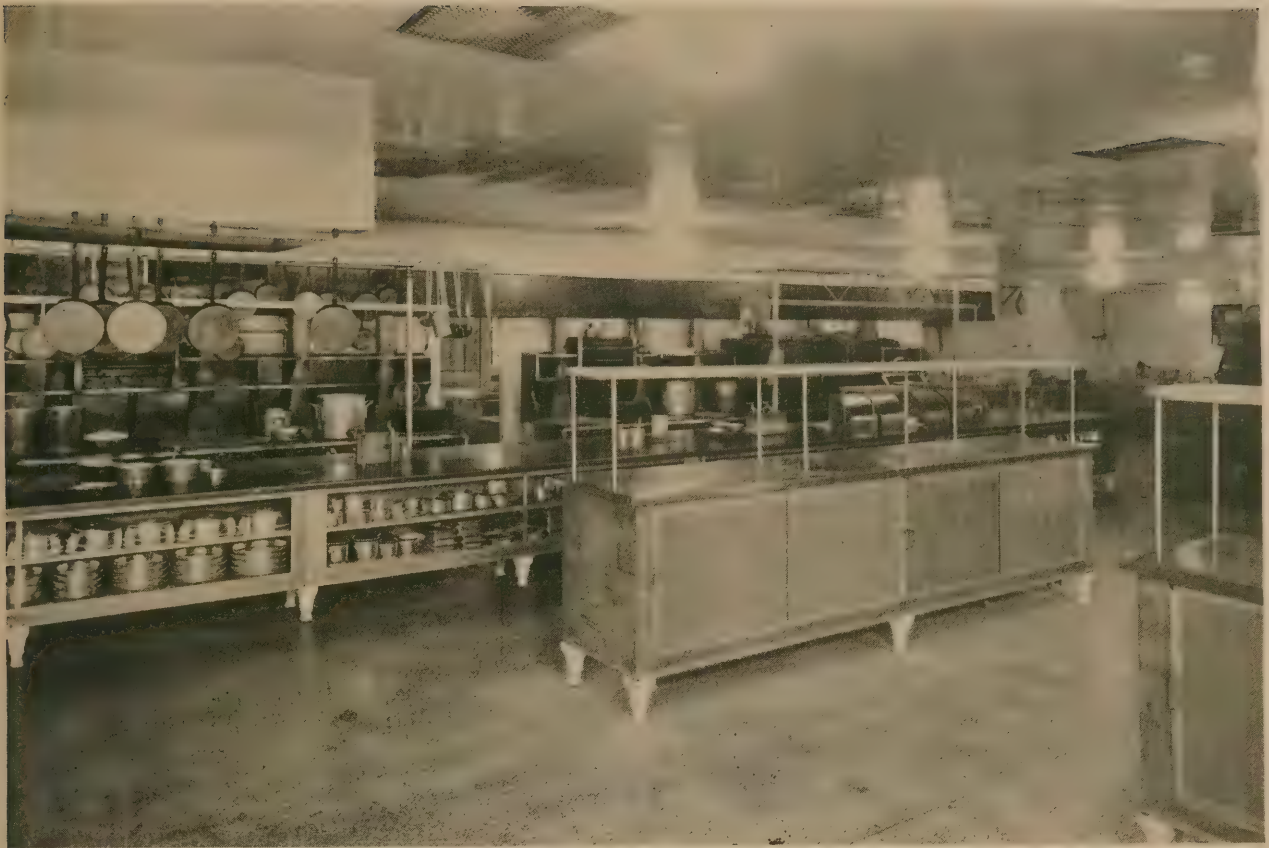
Pantry Division, Hotel Fountain Square, Cincinnati, O.



Main Kitchen, Hotel King Cotton, Greensboro, N. C.



Main Kitchen, Hotel Sir Walter Raleigh, Raleigh, N. C.



Range Division, Lake Shore Athletic Club, Chicago



Cold Service Division, Lake Shore Athletic Club, Chicago



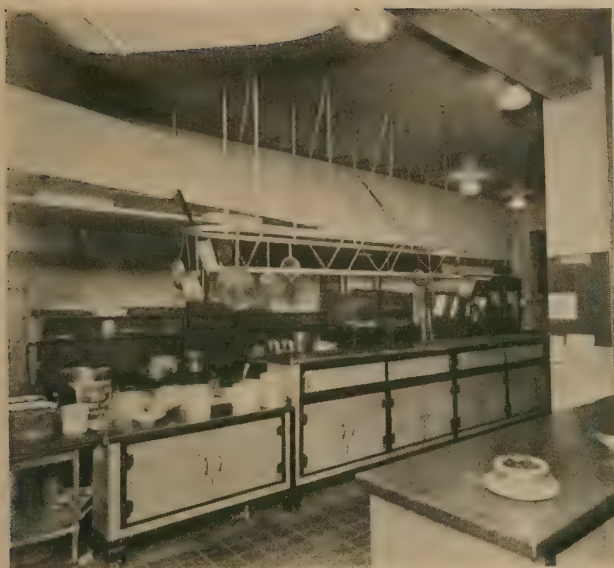
Kitchen, Hotel Sinton, Cincinnati, O.



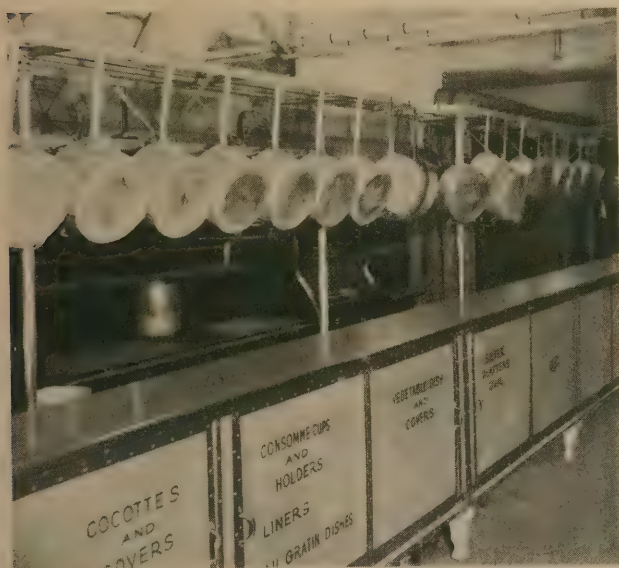
Kitchen, Hotel George Vanderbilt, Asheville, N. C.



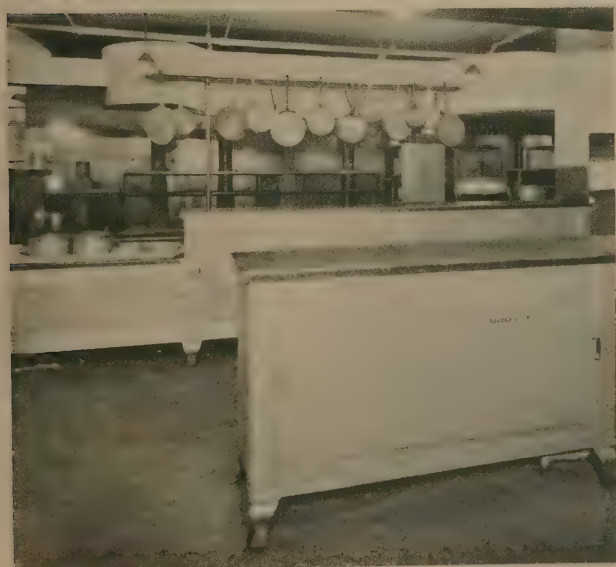
Kitchen, Hotel George Washington, Jacksonville, Fla.



Kitchen, Read House, Chattanooga, Tenn.



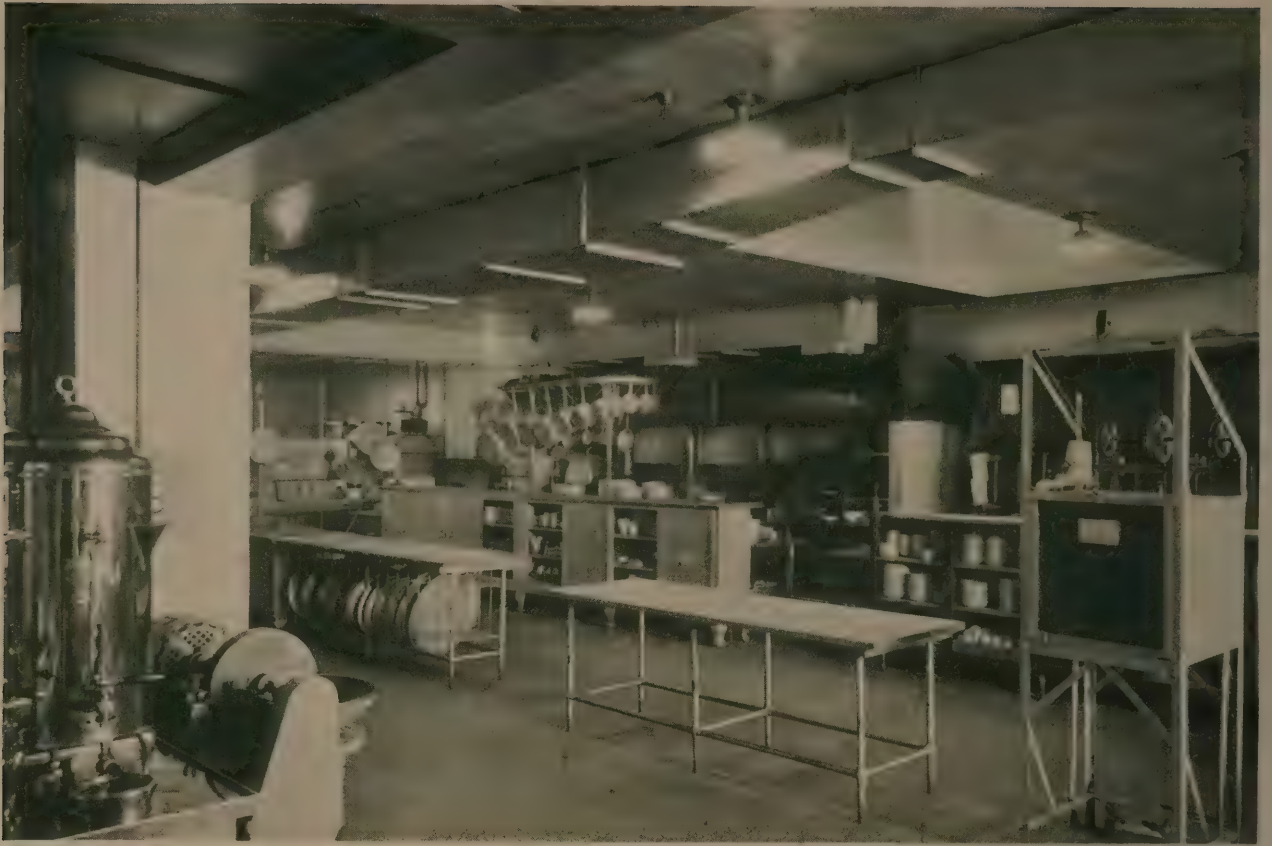
Kitchen, Neil House, Columbus, O.



Morton House, Grand Rapids, Mich.



Hotel Texas, Ft. Worth, Tex.



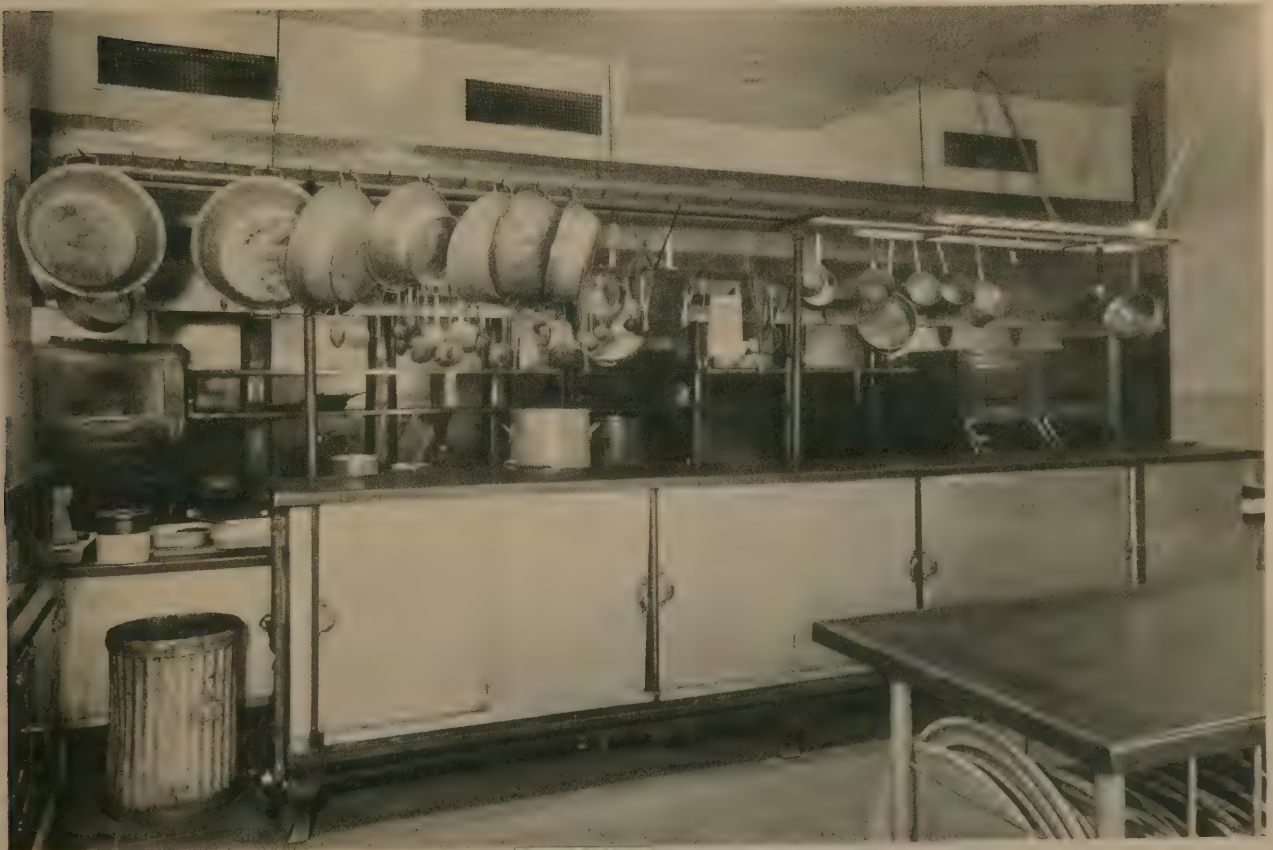
Kitchen, Atlanta Athletic Club, Atlanta, Ga.



Kitchen, Hotel Don Ce-Sar, Pass-a-Grille, Fla.



Coffee Shop, Hotel Fort Shelby, Detroit, Mich.



Kitchen, Hotel Fort Shelby, Detroit, Mich.



Coffee Shop, Hotel Sinton, Cincinnati, O.



Coffee Shop, Hotel Park View, Venice, Fla.



Main Kitchen of the Ft. Worth Club, Ft. Worth, Tex.



Main Kitchen, Illinois Women's Athletic Club, Chicago

Three Typical Lunch Room Plans

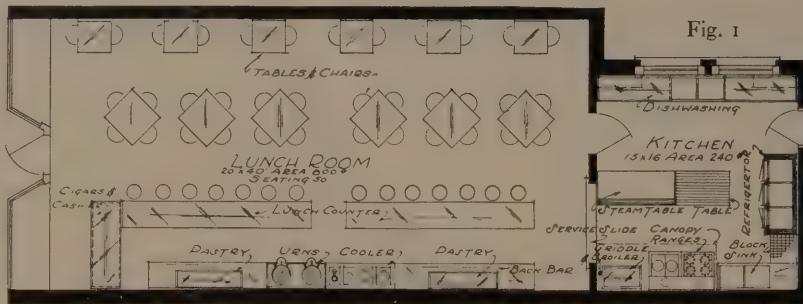


Fig. 1

HERE we have the orthodox single counter arrangement, with table service such as is found in hundreds of small hotels. A coffee shop like this would be likely to serve about 125 meals per hour during the rush periods, which is less than the maximum for a lunchroom, due to the large number of tables. The kitchen is small for the room and would have to draw upon the main kitchen for supplies and some preparation.

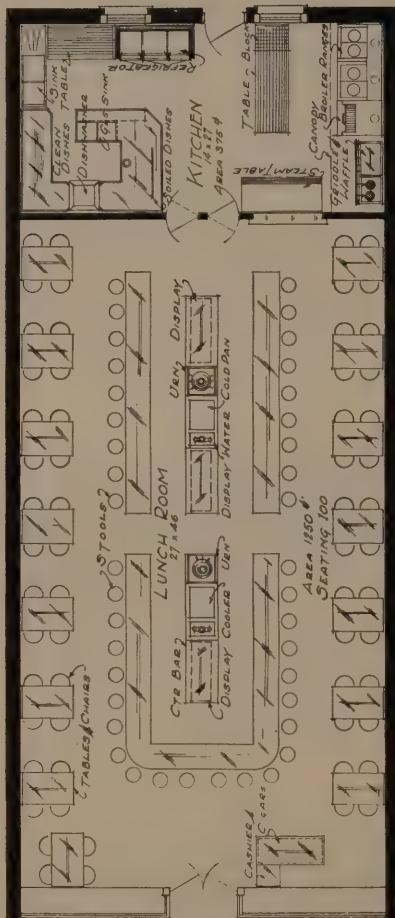


Fig. 2

Fig. 2. This horseshoe counter arrangement is another common type. With the proportion of table seating capacity that exists, the room would serve around 275 persons per hour.

Fig. 3. The multiple horseshoe arrangement without tables is a type much in favor in newer installations. Its serving capacity is high—500 to 600 per hour—as all service is at the counter.

For both these lunchrooms, the kitchen area is smaller than generally desirable and therefore would necessitate reinforcement from the main kitchens and storerooms.

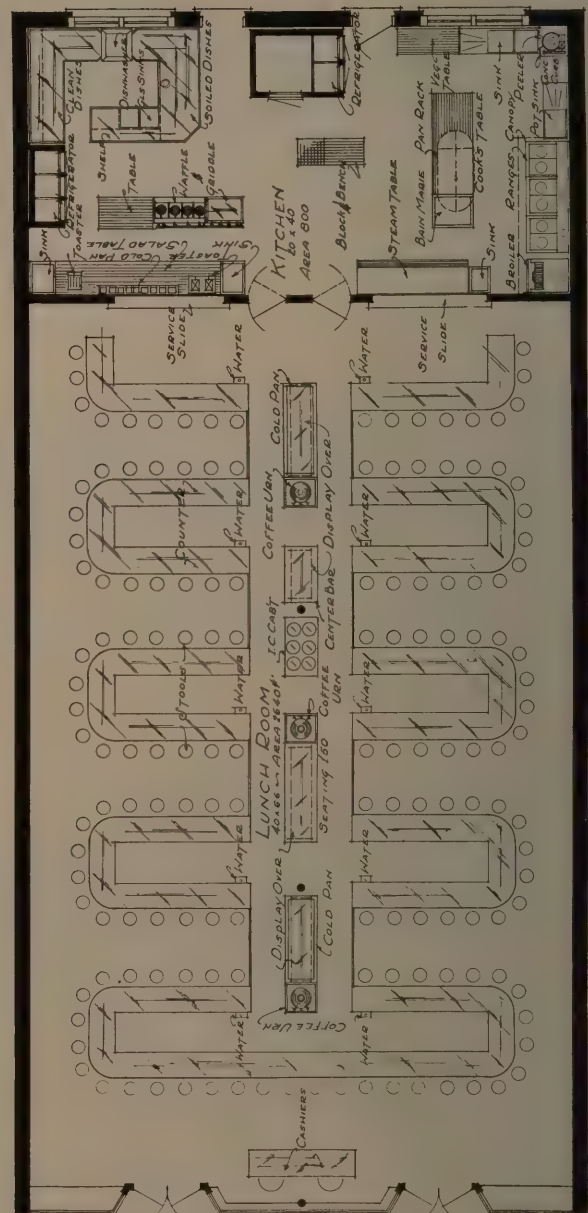


Fig. 3

Hotel Lunch Rooms

As may be seen from the three model plans on page 386, there are three general types of lunchroom arrangement—the single counter, the horseshoe and the multiple horseshoe counters. Which of these should be used depends first upon the size and shape of the room and second, on the type of service to be given.

Assuming that the room has already been allotted, the first move is to decide whether tables are desired as well as counter service. Formerly most hotel lunchrooms provided both. Of late years, however, many of the highest class houses, among which the Palmer House and the Hotel Sherman in Chicago are examples, have eliminated tables in favor of greater counter capacity and simpler service operation. It is quite largely an individual problem, but from the standpoint of quick service and lower cost of operation the use of the counter alone seems best, and the only thing against it would be the possibility of prejudice on the part of patrons against eating at anything but a table.

In the actual planning of the lunchroom, the first thing to fix upon is the size and location of the kitchen. (As has been said in the previous chapter, the kitchen area should be $33\frac{1}{3}\%$ to 50% as large as the lunchroom proper and should be located immediately adjoining it.) Having decided upon this, the engineer can proceed to lay out the counter arrangement in such a way as to afford the waiters

easy access to the kitchen, both for ordering and securing food, and for disposing of soiled dishes.

If the room is a narrow one, the single counter arrangement running along one wall of the room (see Fig. 1, page 386) is just about the only thing that can be worked out. In larger or wider rooms, you have the opportunity to use the horseshoe type counter (Fig. 2, page 386), or the multiple horseshoe or irregular type of layout shown in Fig. 3, page 386. This latter kind of counter arrangement is more recent than the other two and is coming into increasing use because of the very efficient waiter operation it permits, and also because it frequently makes it possible to get a larger counter seating capacity in a given room. For this reason irregular shaped counters which are a variation of the above also are sometimes used in very small rooms instead of the straight single counter.

Let us describe briefly the arrangement of a lunchroom, assuming that the plan is of the conventional single counter type. The rear of the counter should be built to serve as a pantry counter, containing tilting bins for sugar, crackers and hard rolls; shelves with dish boxes, divided drawers for spoons, forks and knives, and pie cabinets with spring screen doors accommodating full tins of pies cut and ready to serve. These should be divided into stations with a duplication every twenty feet where long counters occur.

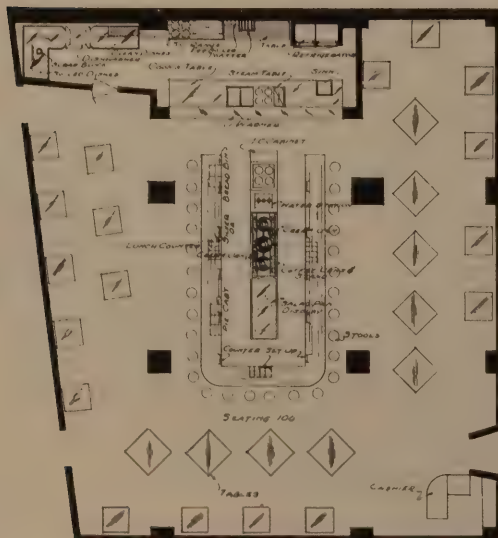
In some of the larger lunch rooms various stations are laid out to specialize in different kinds of food. In the East we find oyster counters where



Old Town Coffee Shop, Hotel Sherman, Chicago



Coffee Shop and Kitchen, Webster Hall, Pittsburgh, Pa.



THIS plan shows a 100 seat coffee shop with a horseshoe lunch counter and dish service with complete short order service kitchen in the rear of the room. All preparation work is done in the main kitchen and placed in this lunch room kitchen for service. The kitchen here gives the general effect of a grill, which is particularly appropriate for a hotel like Webster Hall, which caters to men. Both the kitchen and the service equipment exhibit splendid appearance without the use of fancy or excessively expensive equipment.

The kitchens and food service departments of Webster Hall were planned and equipped by the PICK-BARTH Companies.

Henry Hornbostel, Architect



Hotel Chieftain, Council Bluffs, Ia.



Hotel Benjamin Franklin, Philadelphia, Pa.

oysters and clams are opened in front of the customer and either served on the half-shell or made into stews. We also find small soda fountains built into the rear of lunch counters. Naturally each restaurant has to have its peculiar equipment to take care of these conditions, but they do not form a part of the standard lunchroom equipment and will not be given major consideration here.

The end of the front counter towards the entrance is generally for the cashier and is made in the form of a quarter circle to enclose the counters. From the end of this fixture to the kitchen wall is a continuous service pantry consisting of back counters, pastry cases, display cabinets, glass shelves, ice pans, refrigerators, combination coolers, urns, dish heaters, warmers and a special menu board. All of these fixtures are for food which is ready to serve.

Back counters are built with the exposed exteriors to match the front counter. A uniform width of two feet is required in order that it may line up with other fixtures requiring this width and a uniform height of three feet is now standard for these same units. Sanitary construction on 8 inch legs is the safest, but many prefer to have the fixtures go to

the floor, in which case a marble or glass base is provided.

All portions of the back counter should be enclosed and it should have recurring series of tilting bins, deep drawers, and parts enclosed with sliding doors or hinged doors as storage space for bread, dry cereals, linen, china and many other items constantly needed. Provision must also be made here for cooled drinking water. The back counter should be well finished and arranged to be kept in order easily. The top surface should be the same height as the main counter top. On the back counter rest pastry cases, display shelves and stands, fruit coolers and various similar fixtures.

At the end of the series of counters the kitchen wall may be provided with a slide, through which all service from the kitchen is obtained, thus eliminating the necessity for the waiters going into the kitchen at all during service hours. This, however, necessarily requires a rather noisy operation as each waiter has to step up to this slide and shout his order to the chefs who are back of the partition and a waiter does not generally repeat any of these orders in too low a tone. Many hotels object to this and provide doors into the kitchen, entirely



Hotel Liberty, Cleburne, Tex.



Hotel Pfister, Milwaukee, Wis.



Lunch Room of the Palmer House, Chicago

doing away with service through the kitchen wall.

Very few hotel lunchrooms consider it essential to carve meat, fry chops or roast meat in the lunch room proper. This is more or less a fad which has complicated ventilation problems and caters to some special feature, such as waffles, wheat cakes or roast fowl. The hotel lunchroom means more than one specialty item; it means that nearly any article of food which a man may desire may be obtained, properly prepared. It thus caters to the broadest possible class of trade. A reputation for serving everything in a first-class manner rarely needs window specialty in order to secure a capacity business.

Stools should be two feet apart center to center in order to give each patron sufficient elbow room.

When the high counters are used, a foot rest is fastened to the counter. Often a back is provided for the stools and each seat is upholstered. Four-chair tables of the 30x48 inch or 36x36 inch size may be used for coffee shop service, two-chair tables may measure 30x30 inches. Tables should never be set too close together; 42 inches is the minimum space required between 30x48 inch tables and 48 inches is much better.

Where the room becomes wider you can then provide a horseshoe lunch counter through the center and a series of tables on both sides and surrounding the counter, or can adopt the multiple horseshoe arrangement with or without table service. The narrowest room which can properly be operated as a



Hotel Ft. Meigs, Toledo, O.



Hotel Redmont, Birmingham, Ala.



Lunch Room, Hotel Mayfair, St. Louis, Mo.

horseshoe lunchroom would be, including a center counter, approximately 19 or 20 feet wide. This allows a 4 foot aisle space on each side of the room, two lunch counters of approximately 2 feet each and a space for center counter and serving aisles of 7 or 8 feet more.

As to the lunch counter itself, there are two different styles now in use. One is the standard counter 36 inches high and 22 to 24 inches wide, with an 8 or 10 inch overhang. The other is a low counter of table height, used with a low stool. This latter is a new development that is very well thought of and may be seen in the photograph of the Palmer House Lunchroom on page 390. Lunch counters may be had in wood, metal or tile construction the

latter two of which are much preferable. The panels are made in an endless variety of effects by the use of tile, enameled steel, glass, and other materials. Tops are generally either glass or rubber tile. Wood is not desirable for counter tops because it is too easily damaged, and marble also is frowned upon as it is too absorbent. Whether the counter is mounted on sanitary legs or a closed base is an individual problem, although the former is most popular.

The lunchroom kitchen differs from that of the ordinary dining room in several details, but most of them are not important enough to discuss here. Special mention, however, should be given the Short Order Range. Lunchrooms have a great demand for



Lunch Room and Kitchen of the Hotel Loraine, Madison, Wis.



Graybar Savarin Restaurant, New York

short orders of all kinds, so in addition to the broilers which will take care of chops, steaks, fish, lobsters, etc., a cake griddle and waffle iron are essential. Often a toasting grill is put under the cake griddle and the entire fixture is mounted on a heavy stand with back and ends enclosed, thus making a special range unit. This kind of fixture is very useful because it takes so little space and is so convenient. In certain sections of the country there is a tendency to put the short order range in with the back counter equipment. We do not advocate this except in rare instances as it has few if any advantages and has many drawbacks among which ventilating and sanitation are quite serious.

The Hotel Cafeteria

In considering a cafeteria for hotel purposes, it should be understood at the outset that in order to secure the advantages of self-service operation, the room should seat at least 200 and preferably 250. Smaller cafeterias are used but as a commercial proposition they are not as efficient as the large ones.

The space needed, as told in the previous chapter is about 15 square feet per seat for the cafeteria proper, with $33\frac{1}{3}\%$ to 50% additional space for the kitchen.

As to shape, the more nearly the cafeteria room approaches a perfect square, the better. Never



Kitchen of the Graybar Savarin Restaurant, New York

the cafeteria service layout, let us consider a representative case where capacity is from 225 to 275 seats.

The first question that arises is what arrangement and what length of counter are best. The satisfactory solution must meet two demands, namely: how to serve the most people in the shortest possible time and how to build up the highest check average. The first attempt to answer these questions was to increase the length of the counter and of each fixture until some counters 125 feet in length or over were tried. This was found to be very expensive both in the number of help required and in the quantity of food needed to make a display. It was also discovered that no more people could be served in the same time nor could a greater check average be maintained after the total length got above 75 feet. So today an average length of 75 to 80 feet is standard for any room seating from 225 to 275 persons. Lesser lengths have capacities nearly proportional to their lineal feet, or in other words, if we assume that the maximum capacity of any 80 foot counter is 600 people per hour, a 40 foot counter would serve but 300 in the same time. When the seats number more than 300, two separate counters are necessary.

Having settled the length of the counter at about 75 feet the next questions which arise are the arrangement and lengths of the respective fixtures. All counters have about four departments: salads and cold meats; hot meats and vegetables; pastry and desserts; ice cream, and cold and hot drinks.

It has been found that an equal allotment of space to each of these four departments nearly approaches the ideal, with the steam table possibly getting a little more than its share.

As to the order in which they should appear, there are differences of opinion and it is certain that every combination of the above can be found in successful operation. As a general thing the best arrangement would be to place them in the order named in the preceding paragraph, with the salads preceding the steam table, the pastry following it and the drinks served last.

There are good sound reasons back of this arrangement. The object of feeding most people per hour and building up the highest check average is best served in this manner. The slowest service at any part of the counter is at the steam table due to the carving which must be done there. If the line is halted in front of an attractive array of salads, many orders will be sold which would not be taken later. Nearly all agree that the pastry section should follow the steam table and that the ice cream and drinks should be last. It really is very bad judgment to serve the liquids in the middle of the counter as disastrous accidents are bound to occur at the counter if cups of coffee or tea and glasses of milk and water are being carried while other food is selected.

We do not advocate a soda fountain, oyster bar, short-order range or other means of preparing any food or drink to be used as a part of the counter or on the dining room side of the wall back of it.



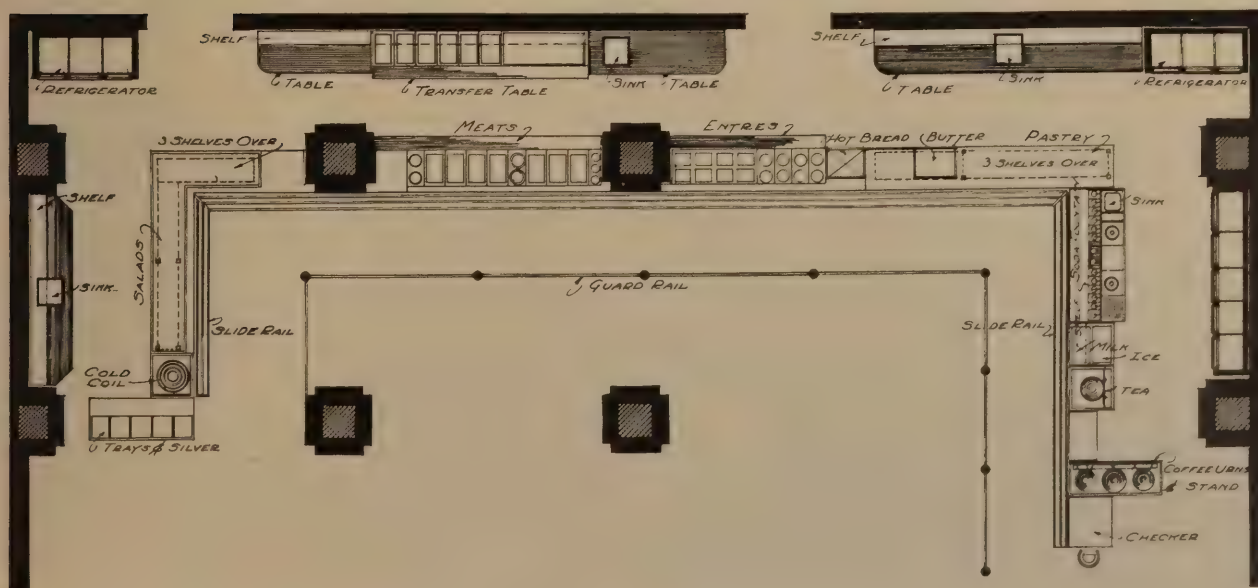
Cafeteria, Hotel Tulsa, Tulsa, Okla.



Cafeteria of the Rice Hotel, Houston, Tex.

THIS cafeteria service counter was arranged to conform with the architectural requirements of the room and as the main kitchen is some distance from the cafeteria service counter, auxiliary steam table, bain maries and refrigerators are installed in the back wall line up complete to take care of the reserve supply of food.

The cafeteria of the Rice Hotel was planned and equipped by the PICK-BARTH Companies.





Soda Parlor, Granada Apartments, Brooklyn, N. Y.

Many have tried them in connection with cafeteria service, but not with success. Any preparation of orders along the counter delays the line to just that extent and one should not lose sight of the fact that what is desired is a service counter where the orders are ready for the customer. Oysters on the half-shell, eggs, and toast may be handled to a limited degree, but they should be made ready in the kitchen and served through the slides. Most cafeterias do a capacity business at noon and consequently all short-orders should be eliminated during this meal. Breakfasts and suppers, however, offer an opportunity for some short-order service.

The construction of cafeteria counters is practically the same as with lunch counters. It is necessary to understand, however, that such fixtures as steam tables, cold pans, refrigerated cabinets, dish warmers, etc., should not be built as actual parts of the counter itself, as the effect of heat and cold on the counter front is undesirable in many ways. It is possible to effect a great saving in original cost

by building all fixtures into the counter, but it is so unsatisfactory that it has been abandoned by all reputable manufacturers. The proper construction is one where the counter is built as a separate unit with complete cutouts where hot or cold fixtures occur.

Soda and Soda-Lunch Rooms

Rooms of this kind are a natural feature for hotels and are very popular indeed. They do not run at all uniform in character however, and while in some cases they are primarily soda fountain and candy stores, others will in reality be restaurants with a limited menu, with the addition of a soda fountain. For this reason it is not practical to attempt any great discussion of such rooms from an engineering standpoint and we will confine ourselves to the showing of three representative plans on page 397, which are sufficient to show the general method of handling different problems of service.



Post Tavern, Battle Creek, Mich.



Allerton House, Chicago

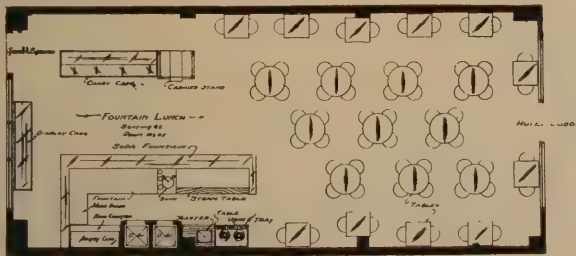
Three Typical Soda-Lunch Room Plans

DUE to the large variation in the character of Soda Rooms, it is not easy to reduce their planning to as definite a set of principles as is the case with other kinds of eating places. Much depends upon the extent to which actual food service is to be provided, and the same is true about the selling of candy and pastries. Then too, where light lunches are to be served, there is always the question as to how much of the serving is to be done from the fountain and back bar and how much from a separate kitchen or serving pantry. The three plans shown here serve to illustrate these variations and also give an idea as to the space required for rooms of different capacities.

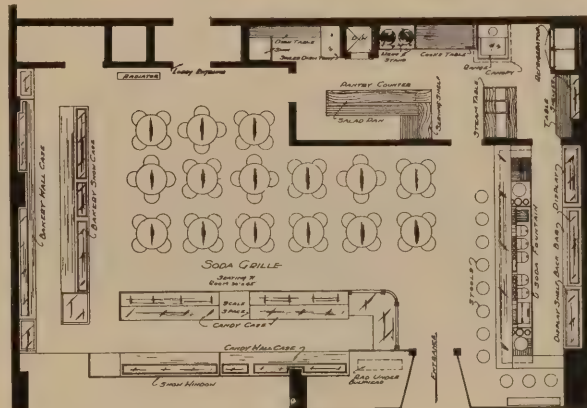
In the location of the Soda Room in the building plan, the attraction of outside patronage by means of a street entrance is a vital thing to consider, and while an en-

trance to the hotel public rooms is desirable, it is secondary in importance to a public entrance and storefront. Another thing which demands careful attention is the provision of dumb waiters or subveyor to carry away soiled dishes and refuse and to bring in clean dishes and supplies. Even where a serving pantry is available for food preparation this should be considered, as it will facilitate service and save both labor and space.

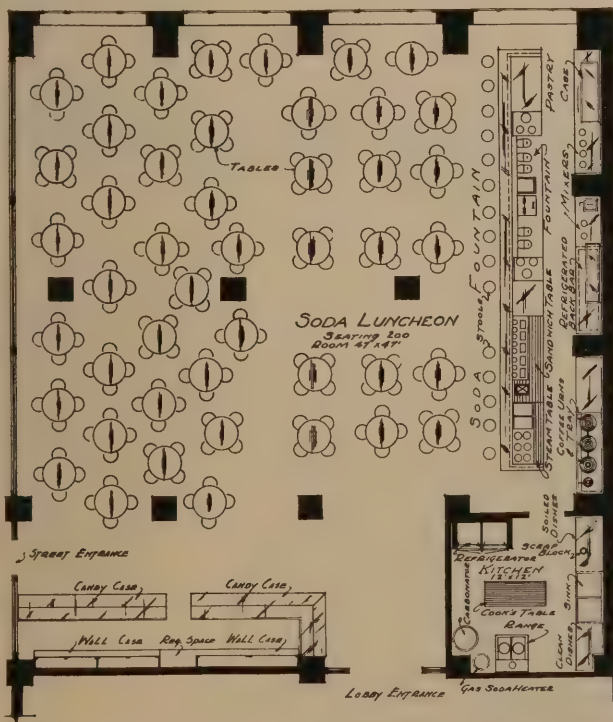
If any considerable amount of light luncheon service is to exist, we recommend the partitioning off of a separate space for a kitchen, for food preparation on the back bar or the fountain causes congestion during rush hours and detracts from the appearance of the place,—to say nothing of the advantages in sanitation and the quality of cooking.



Plan No. 1. Capacity, 62 seats. Size of room, 19 by 43 feet, or an area of 817 sq. ft., arranged for both lobby and street entrance. Designed mainly for Soda Fountain, hot drink and sandwich service, with candy sold only in a small way. The Soda Fountain includes a small sink and a small steam table, both built into the counter, and, in addition, there is room for a pastry case, a twin urn and a sandwich toaster against the wall in place of a back bar. Dumb waiters provide for removal of soiled dishes, etc., to the floor above or below, and also may be used for receiving food or supplies. This plan is typical of hundreds of small Soda Rooms used in small hotels with good success. It is not elaborate, but contains the necessary features to promote a year-around business.



Plan No. 2. Capacity, 71 seats. Size of room, 30 by 45 feet, or an area of 1350 square feet. This room features both light lunch service and the selling of candy and pastry specialties. There is a good-sized kitchen partitioned off as a separate room, which is capable of preparing quite a large variety of dishes. This kitchen is further provided with a dumb waiter connecting it with auxiliary facilities on another floor. By means of this kitchen, the Soda Fountain is confined to the service of cold drinks, etc., thus increasing its capacity and lessening confusion. Very large display cases for confectionery and pastries run along two sides of the room, with wall cases permitting excellent display. We consider this a most excellent arrangement and one which takes the fullest advantage of every opportunity to bring in revenue.



Plan No. 3. Capacity, 200 seats. Size of room, 47 by 47 feet, or an area of 2209 sq. ft. This Soda Room illustrates the case where there is a large volume of service on a small menu. Here the soda fountain and back bar are both used for preparation and service of sandwiches and specialties, aided by a small kitchen for preparation and dishwashing. This arrangement gives great economy of space, and while, as has been said, the food preparation behind the counter is not an ideal thing, the smallness of the menu and the arrangement of the counter reduce the danger of confusion and congestion as far as possible. A good-sized candy department is also included. It has been found that this type of a room is exceedingly successful in handling large after-theatre and luncheon crowds quickly.

Note: It scarcely needs mention that any soda fountain installed today should be mechanically refrigerated. There are many arrangements available, and particularly where a large volume of business is to be done, the arrangement should be selected with the aid of a competent engineer. If large urn batteries, steam tables and the like are to be located in the soda room proper, the ventilating should receive special attention to prevent food odors from permeating the room.



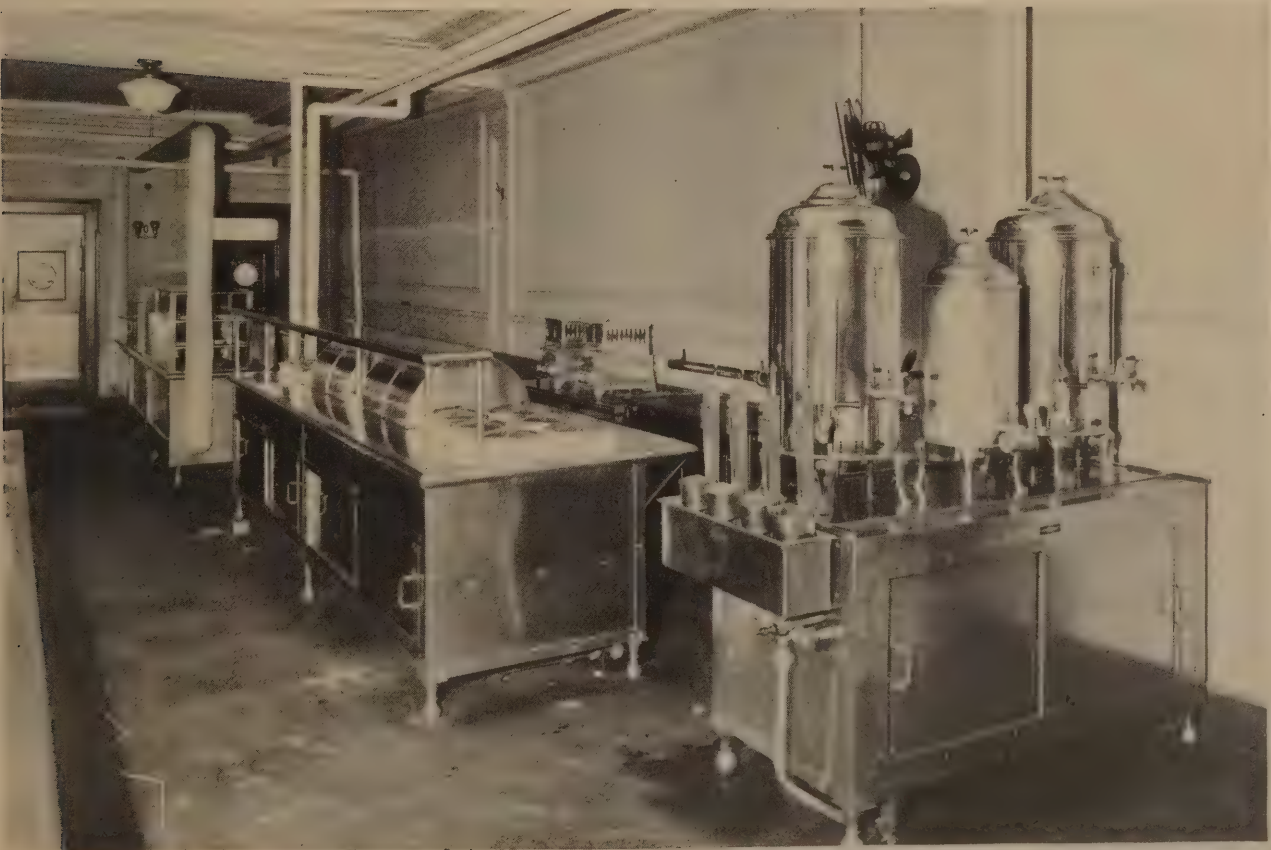
Cafeteria, Hotel Barlum, Detroit, Mich.



Soda Parlor, Hotel Ft. Shelby, Detroit, Mich.



D. L. & W. Station Lunch Room, Hoboken, N. J.



Kitchen, D. L. & W. Station Lunch Room, Hoboken, N. J.

A Comparison of Two Typical Qualities of Equipment

Showing the differences between Heavy Duty and cheapened light weight construction—and the resulting effects upon utility and length of life

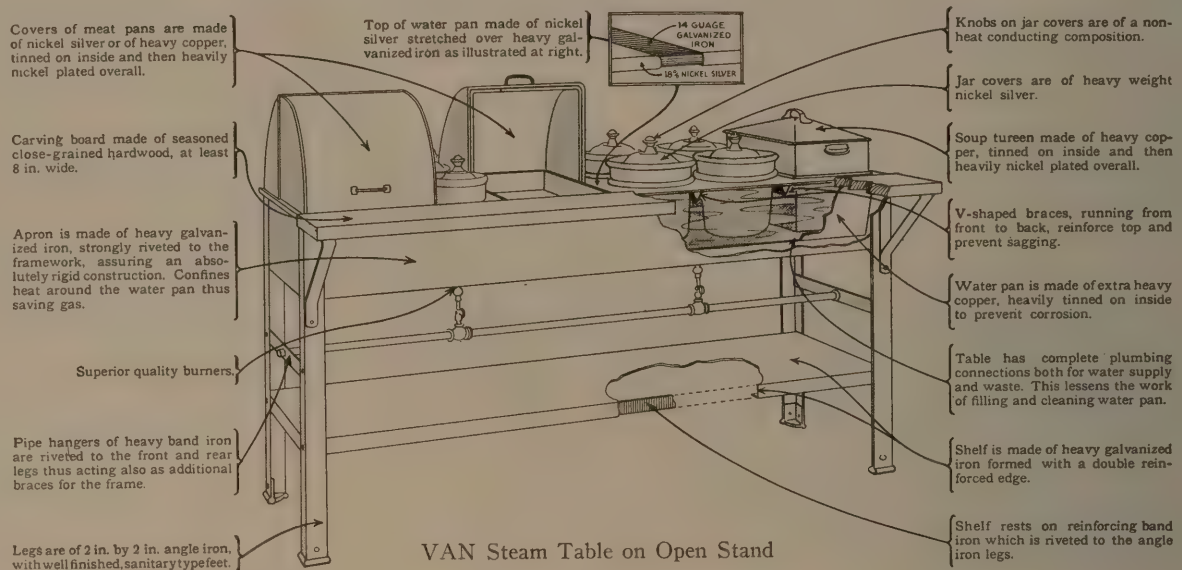


Fig. 1—Heavy Duty Construction. The illustration above shows a typical steam table of standard quality. It is not a "show piece" but a moderate-priced product of sturdy construction, which has proven its dependability and economy in hundreds of busy restaurant kitchens. Its framework is strong and rigid; where needed, it is well reinforced and braced. Parts which come in contact with water are heavily tinned and plated.

There is ample protection against rust and corrosion. Food receptacles and their covers are durable and sanitary. Better steam tables are made by the use of monel metal and other high priced materials and such improvements are well worth the additional investment, but where initial price is a factor, this may be considered a satisfactory and economical quality.

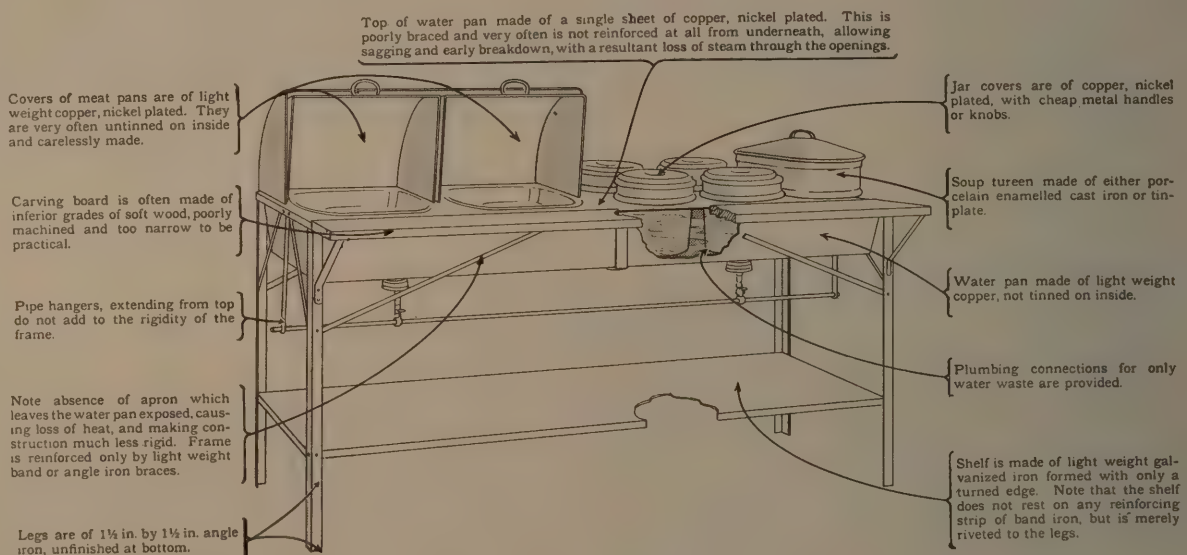


Fig. 2—Cheapened Construction. This illustration shows how a steam table superficially similar to that in Fig. 1 may be cheapened in materials and construction—and the result. The framework is lighter, with little rigidity and poor finish, and there is a general absence of reinforcing and strengthening braces. Parts coming in contact with water are galvanized instead of tinned and plated and there is altogether insufficient protection against corrosion and rusting of metal parts through-

out. Food receptacles and accessories are less sanitary, convenient and durable. Such a steam table is cheaper, of course, but every cent saved is at the expense of durability. How poor such economy is can be judged by the fact that although Fig. 1 will ordinarily cost about 25 to 30% more than Fig. 2, it will last from two to three times as long at a conservative estimate—and with far less cost of maintenance and repair.

Facts Every Hotel Operator Should Know About Kitchen Equipment Construction

Hand in hand with the engineering procedure comes the problem of selecting the quality of equipment to be specified. This is a really basic decision. To the architect and hotel operator who has not had much previous experience it may be a puzzling one to make. Kitchen equipment is complex, its operation is technical, grades of quality do not appear to be sharply defined and designs and construction are not standardized throughout the industry. Yet, in spite of these, it is not beyond the layman to form a sufficiently clear conception of the subject to solve this problem intelligently and with the right viewpoint.

Let us examine a hotel kitchen and analyze its conditions of operation in a simple way. In this we may speak principally of the main kitchen, but what is said will also apply to lunchrooms, cafeterias and other food service departments as well.

The main classes of equipment in the kitchen are as follows:

Cooking Appliances (including chiefly Ranges, Broilers, Soup Kettles, Vegetable Steamers, Urns, Toasters, Cookers and Utensils).

General Service Equipment (including chiefly, Steam Tables, Bain Maries, Dish and Silver Heaters, Roll Warmers, Work Tables, Sinks, Dish Tables, Cafeteria Counters, Urn Stands, etc.).

Refrigerated Equipment (including Refrigerators and also Ice Cream Cabinets, and Cold Service Fixtures).

Mechanical Equipment (including Dishwashing Machines, Peelers, Slicers, Mixing Machines, Ice Machines, and other mechanical appliances).

Now, dealing as the kitchen does, with preparation of so delicate a thing as *food* (in many cases coming in actual contact with it, and in all cases in close proximity), it is an absolute essential that the equipment should permanently retain its original cleanliness, sanitation and cooking qualities. Furthermore, kitchen equipment operates under conditions and methods of use which, purely from the standpoint of wear and tear, are intensely severe, and which demand unusual power of resistance from every product.

If you observe the operation of a kitchen closely, you will come to recognize no less than eight kinds of deterioration to which the equipment is subjected:

1. *Wear and tear* due to friction, impact, etc. and causing breakage of parts, wearing through or denting of surfaces, loss of rigidity and the like. Ranges, broilers, work tables, dish tables, sinks, storage equipment, and utensils are the main sufferers, but all equipment in the kitchen is affected.
2. *Deterioration from Heat*—both as found in the cases of equipment subjected to direct contact with intense heat (such as ranges, broilers, ovens, hot plates, toasters, urns, steam tables, etc.), and as found in more moderately heated equipment (such as warmers, kettles, steam cookers, etc.) where the action of heat contributes to other kinds of deterioration.
3. *Deterioration from Contact with Food* involving not only cooking receptacles such as utensils, kettles, steamers, urns, and steam tables, but likewise many appliances such as slicers, choppers, mixers, and peelers.
4. *Deterioration from Cleaning Processes*—due to the action of both chemicals and abrasives. This affects utensils, general service equipment, urns, steam kettles, and many other things.
5. *Deterioration Due to the Effects of Atmosphere and Moisture*—Under this head come the numerous kinds of corrosion, tarnishing, rusting, and other deterioration affecting most metal and wood equipment.
6. *Loss of Sanitary Properties*—a danger which is nearly universal and manifests itself in the accumulation of dirt in inaccessible places, in the wearing-off of tinning, galvanizing, or plating, in the absorption of grease or dirt into metal or wood surfaces, and in numerous other ways.
7. *Mechanical Wear*—that is, the wear which occurs in mechanical parts as a result of their constant operation (as found in machinery, power devices, sliding and hinged doors, etc.).
8. *Loss of Useful Properties*—by which is meant such things, for example, as the loss of refrigerating efficiency due to the refrigerator becoming not air tight.



The Improved "Petersen" combination urn—the highest development in coffee making apparatus.

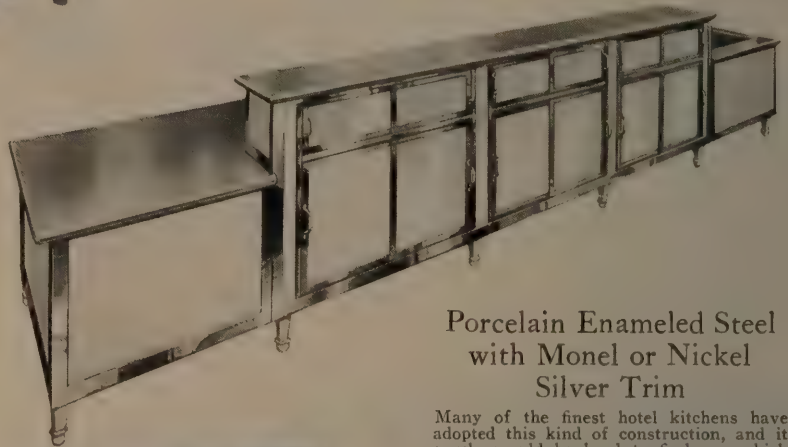
Five Standard Types of Construction Used for General Service Equipment



**All Monel Metal
Construction**

This is the king of all kitchen equipment. Practically every part is made of monel metal, which has proven itself the most desirable material for kitchen purposes from every standpoint. Such equipment as this is almost everlasting and may be relied upon to retain its original serviceability and appearance throughout the life of the highest class hotel structure. Its original cost is high, but where the hotel operator is able to make such an investment, there is no doubt as to its ultimate economy.

Within the limits of good practical construction there are several different types of equipment from which to choose. As made by the John Van Range Company, the manufacturing division of the Albert Pick-Barth Companies, all are built according to the best heavy duty standard, but differ according to the materials used and also in some refinements and finish. The five main kinds of construction are shown here, and in addition to cooks' tables and warmers, apply to steam tables, urn stands, roll warmers, pantry counters, cold service counters and many other similar items of equipment.



**Porcelain Enameled Steel
with Monel or Nickel
Silver Trim**

Many of the finest hotel kitchens have adopted this kind of construction, and it surely would be hard to find one which will give a more handsome effect. The outside facings are made of porcelain enameled steel. Tops and working surfaces are made of monel metal or heavy steel. The trim may be either polished steel or monel metal. Although the equipment is somewhat less costly than the all-monel type, its fundamental construction is of the heaviest kind, and there are present all of the desirable refinements of finish.



**Blue-Black Steel with Monel,
Nickel Silver or Steel Trim**

This may be considered the moderate priced standard. It is made with all exposed facings of high grade Wellsville steel. Tops and working surfaces may be either monel metal or heavy gauge steel. The trim may either be monel metal (shown above), or polished steel (illustrated below).



Galvanized Steel with Steel Trim

This equipment is designed for establishments which must hold their initial investment at a low figure. The framework and all structural parts are very sturdy and serviceable. Exposed surfaces are of heavy gauge galvanized steel, frequently given a finishing coat of paint or enamel. The metal trim is steel, either polished or painted to match the panels and doors. Tops and working surfaces are heavy polished steel. This makes a strong and rugged construction, and one which is about as inexpensive as is compatible with reasonable length of life.



Anyone who has had the chance to watch a kitchen in operation for any length of time cannot fail to appreciate these things. The constant fight against the accumulation of grease, dirt and corrosion is almost instantly apparent. The severity of wear and tear is perhaps a little less easy to see at a glance, but once it is understood and you observe the constant way the life and usefulness of the equipment are subjected to attack, the wonder grows upon you that any equipment, no matter how strongly made, can long survive. And remember that the same conditions obtain in kitchens regardless of size—they are no less important to consider in a 50 room hotel than in one of giant proportions.

When all is said, the best advice that can be given on the subject of quality in equipment lies in the actual experience of those who have used it for a long time. Based upon almost a countless number of statements by operators of public service kitchens of all kinds and sizes, the overwhelming verdict is:

"The most substantial equipment you can get is invariably the most economical."

That this is a true reflection of opinion is shown by the fact that the largest manufacturers of kitchen equipment have, without exception, achieved their success by the development of *better*, not *cheaper* equipment.

Standardized vs. Special-Built Equipment

Right at this point, it is well to call attention to the advantages to be gained by the use of standard design equipment. It is an unfortunate habit of hotel and restaurant kitchen operators to insist upon having a large share of their kitchen equipment made to special design and sizes. It is natural for a chef, who takes pride in his profession to have his individual ideas about equipment and there is no doubt that many improvements have thus been developed. It is granted therefore, that there are instances where special ideas are worth the carrying out, even though they add to costs. But for every such a case there are a hundred where a standard design fixture would serve the purpose every bit as well.

We doubt that kitchen equipment users have any real idea as to how much this tendency toward the use of special instead of standard equipment has cost them. If such a figure could be computed, it would be staggering. The man who wants a special arrangement of doors, a special arrangement of conveniences in a fixture, an odd length or shape or what not, may not realize it, but he is doing something as uneconomical as to ask an automobile manufacturer to produce a car to his individual specifications. The difference is that with automobiles special design is the exception and with kitchen equipment it comes closer to being the rule. A still bigger difference is that in automobiles, the public, by accepting standard designs is getting more and more each year for his dollar, while in kitchen equipment, so far as it remains a made-to-order kind of manufacturing business, cannot give its buyers the same benefits.

Some kinds of kitchen appliances products like dishwashers, power machines, urns, ranges, steamers and kettles are already ninety to ninety-five percent standard. On the other hand general service equipment, dish heaters, roll warmers, refrigerated counters, lunch counters, work tables, sinks, refrigerators and even steam tables are made in an endless variety of styles, sizes, shapes and arrangements all of which stand in the way of mass production and the resulting economies.

Engineers of the PICK-BARTH-VAN organization endeavor to work out all equipment plans by the use of standard types of equipment. If they are helped to do this by an understanding attitude on the part of the architect and owner, a greater degree of economy will be the sure result.

Variation Between Different Specifications

Once your specifications are completed, the matter of actual purchasing would seem simple. *Oddly enough, though, here is the very place where the kitchen often goes farthest wrong! For in nine cases out of every ten, the bids which are received on kitchen specifications are not based on the quality specified at all!*

Of course, in almost any purchasing, the variation in quality between sellers is a problem. In buying kitchen equipment, however, you are confronted with an extreme case of this because there is no yardstick of quality which can easily be applied and because in a large proportion of cases, the equipment is not of standardized design.

Then too, it should be borne in mind that the actual life and value of much of the equipment is determined by things which cannot be detected by appearances. For example, the difference in appearance between sinks which are made of light gauge galvanized iron and riveted together and those which are constructed of heavy steel, arc-welded into a single piece and galvanized afterward is so slight that it is easy to overlook, but the latter is far superior in every way. Another case which comes to mind is in ranges. There is a VAN coal range in an Illinois hospital which has literally been in continuous day and night operation *for over twenty-five years*—yet it is very doubtful if it differs greatly in appearance from many ranges on the market today which would be remarkable if they lasted a third as long.

Thorough Investigation of Quality Pays

In considering bids on the equipment, therefore, see that they are actually made on the same identical specifications, and that every piece of equipment is clearly defined and described. Your specifications should literally *be* specifications—not merely a list of the items of equipment. If you permit manufacturers a wide latitude in the matter, you will be the loser, for your task of choosing between them will be reduced to mere guesswork.

Know what you are buying;—know its dimensions, gauges and qualities of metal, methods of construction, etc., and, unless it is unavoidable, do



VAN Heavy Duty Gas Range

not consider equipment you have not examined personally (photographs, drawings and sketches are misleading). Furthermore, consider only a reputable and responsible manufacturer whose equipment has proved itself satisfactory in actual service, and who will guarantee and stand behind it.

Finally, as a definite guide to help you in purchasing, and in the forming of your specifications, let us offer to you the following thoughts concerning some of the most important classes of equipment:

Remember these things about RANGES and BROILERS:

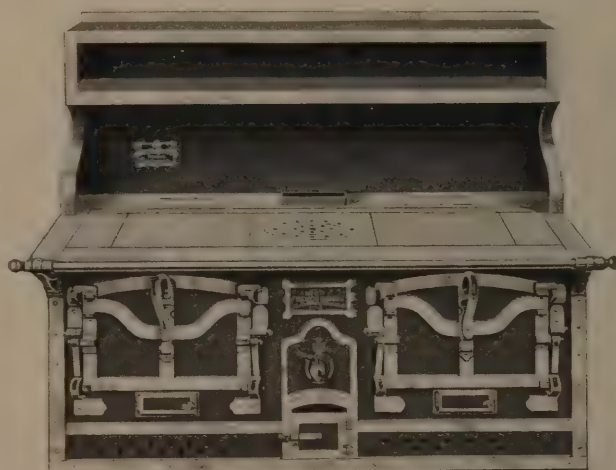
1. The important features of ranges and broilers are: quick, powerful heat, properly placed; economy of fuel consumption; structural strength; long-lived castings in range tops; proper heat insulation; extra heavy doors and other working parts; correct design for the purpose; ease of repair and replacement; ease of cleaning; positive and easy adjustment of air and gas control; correct heat engineering.
2. There are probably no items of kitchen equipment receiving more severe use than ranges and broilers. Hence it is economy to secure the very heaviest and strongest which can be found.
3. A large part of the lasting quality of ranges and broilers lies in the quality of the castings comprising the cooking tops, and the high grade steel and malleable iron fittings. Such things cannot be judged from appearance.
4. Take particular note of the doors, hinges and braces. You will find that in better grade equipment there is a visible superiority in both weight and structure. This costs more, but is worth it.
5. In listening to claims of fuel economy in gas ranges, you must consider the character of cooking to be done. The type of heat application,

for instance, which is most saving of gas where both the top and the oven are in continuous use is by no means most economical under other conditions. A reputable kitchen engineer's advice is your best guide.

6. Where their use is feasible, electric ranges and broilers (of proved quality) are very desirable. A competent engineer should advise you, however, as to whether conditions in your locality favor their use.
7. Coal ranges are not recommended unless neither gas nor electricity is available. Where they are used, they should be the best that money can buy, as they are subjected to more severe strain than any other type of range.

Remember these things about ELECTRIC COOKING APPLIANCES:

1. Important features of electric appliances are: heating elements of demonstrated value and long life; proper type of units for the purpose; rapid, powerful production of heat; economy of power consumption; efficient application of heating elements; quick, easy replacement of burned-out units; proper insulation.
2. Inferior heating units and faulty application of units result in excessive current consumption, slow heating, insufficient heat, and premature failure or burning-out of heating elements.
3. Avoid any equipment which is so designed that the burning-out of a single heating element puts the whole appliance out of commission.
4. Preference should be given to equipment with heating elements arranged so that they may be taken out and replaced in a few moments without the services of a professional electrician.



VAN Heavy Duty Coal Range

VAN
Heavy Duty
Electric Range

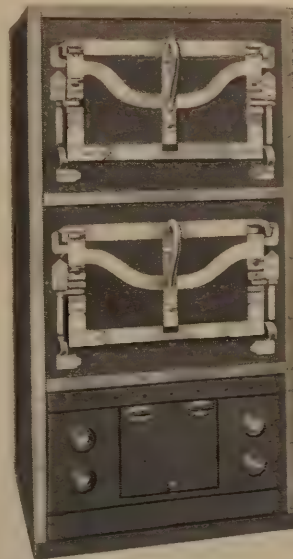
5. Always consult your local power company to verify the exact voltage you receive. If you have a materially fluctuating voltage, the use of electric cooking appliances usually is not advisable.
6. Maximum heating efficiency depends not only upon the type of unit used, but upon its method of application, and also upon the scientific use of heat insulation.

Remember these things when buying GENERAL SERVICE EQUIPMENT (Counters, Dish and Silver Heaters, Roll Warmers, Tray Stands, Urn Stands, etc.).

1. The important features of such equipment are: permanence; strength and rigidity of framework; heavy gauge metal sides; strong, dirt and wear-resisting tops; secure fastening of sides, top, shelves, etc.; heavy, easy-operating, well-fitted doors; resistance of all parts to rust, corrosion, or other deterioration; easy cleaning and absence of dirt-catching places; convenience; good appearance.
2. In comparing two pieces of equipment, be positive you know the gauge (thickness) of sheet metal used. Also, the character, weight, and method of construction of frames.
3. If galvanized iron is used, remember that there are varying thicknesses and grades of galvanizing, and that permanence demands the very best.
4. Do not compare painted steel with porcelain-enameled steel.
5. Observe the metal "trim" used, and do not compare plain steel trim with that made of corrosion-resisting monel metal.
6. Notice the finish of the equipment—and do not compare roughly made pieces with those in which sharp jagged corners, poorly fitting joints, rough edges, etc., have been carefully eliminated.



VAN Heavy Duty Charcoal and Gas Broilers



VAN Electric Roasting Oven

7. Examine the doors and see that they open and shut easily and without sticking or binding.
8. In examining bids, assure yourself that every item included is clearly described and conforms exactly with specifications. Failure to do this is one of the most common causes of trouble and disappointment.

Remember these things about SINKS, WORK TABLES, DISH TABLES, etc.:

1. Desirable qualities of such equipment are: heaviness of sheet metal parts and quality of metal used; heaviness, rigidity, and permanence of framework; strong, clean joints and seams; extra heavy galvanizing; ease of cleaning; absence of rough, sharp corners.
2. Equipment of this kind receives very severe wear and tear, and therefore flimsy, light weight

equipment is decidedly undesirable, no matter how low its initial price.

3. Sheet metal seams may be either riveted or welded. Know which you are buying. Welded equipment is far superior, and while higher priced is much more economical.
4. Do not compare sinks made of ordinary galvanized steel with those made of steel and then galvanized *after* making. The latter are much longer lived.
5. Do not compare tables having angle iron stands with those having frames of steel pipe.
6. In buying wood top tables, do not consider tops made of flat boards on the same basis as those made of vertical sections cemented side by side and secured by rods and dowels. Also, in comparing table tops of the latter type, take into consideration their thickness. Sectional kiln-dried maple tops 3 inches thick are the standard.
7. The strength and design of edges is important. A rounded edge is often to be preferred although more expensive.



VAN Single and Double Electric Broilers

A Comparison of Two Types of Coffee Urn Construction

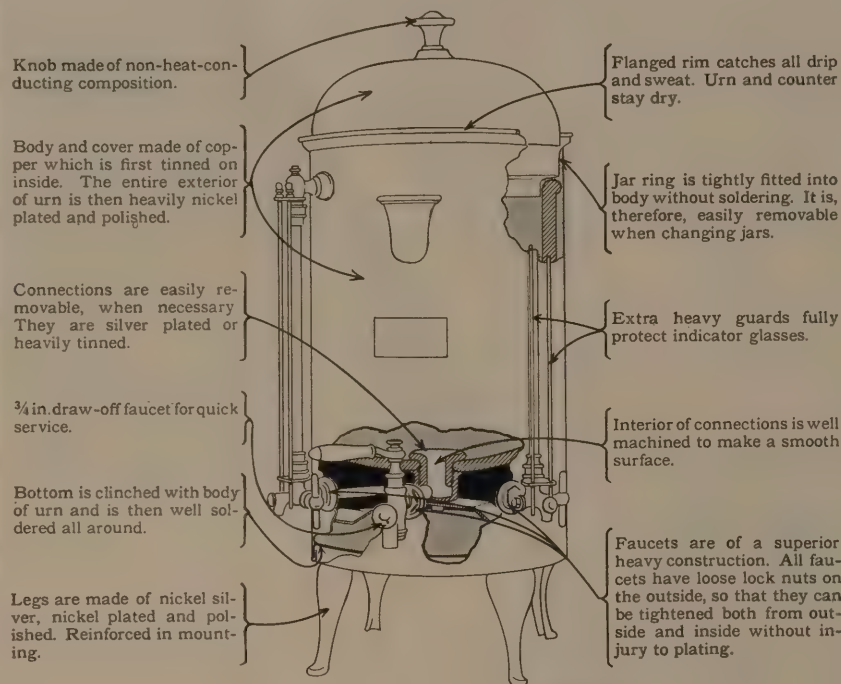


Fig. 1. Standard moderate priced construction

In general appearance these two urns are so much alike that they might easily be confused with one another, and indeed it is a common experience to find them offered against the same specifications. Yet they are radically different in quality and while Fig. 2, the cheapened product, may be 25-30% lower in price, its value is far less because the higher quality urn may be relied upon to last about two and a half times as long under ordinary conditions of service.

The urn shown as Fig. 1, above, is by no means the highest grade quality, but represents medium grade which is considered about as inexpensive a construction as may reasonably be expected to prove practical for ordinary hotel and restaurant purposes. On the other hand, Fig. 2 shows the construction of a type of coffee urn which, although outwardly quite similar, is far below the danger line of flimsy construction for heavy duty service. Fig. 2 represents an urn which is inferior in almost every detail of construction, will cost more to maintain in any kind of serviceable condition, will make poorer quality of coffee and will last less than half as long as the one in Fig. 2. In spite of its lower price, therefore it is a far less advantageous investment.

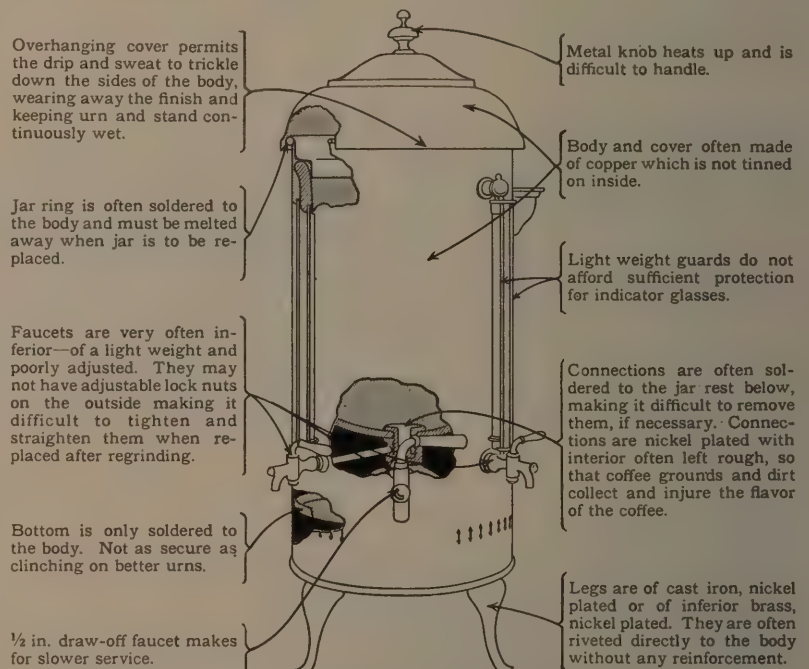


Fig. 2. Inferior cheapened construction

Remember these things when buying COFFEE URNS, URN BATTERIES and COMBINATION URNS:

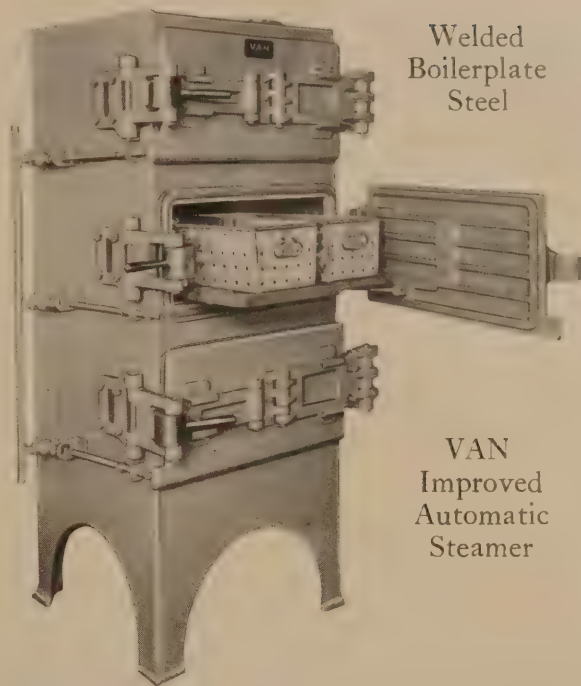
1. The important features in urns are: quality of coffee made; economy of coffee consumption; rapidity of operation; simplicity of operation; ease of cleaning; type of jar used; weight, quality and character of metals used; strength of construction; heaviness of plating; quality of faucets and fittings; attractive appearance.
2. The weight of metal used and the weight of electroplating cannot be judged by appearance, but they are two of the greatest factors in the length of the life of the urn.
3. The construction is of equal importance—and this is also difficult to judge, although the finish of seams, etc., will often prove some indication of this.
4. There are many different qualities of faucets, and the approved type which are long lived,

easy to clean and sanitary, are considerably more costly than the less desirable models. Cheap faucets, although found on many low priced urns are highly unsatisfactory.

5. Comparison of prices is meaningless unless the gauge of metal in both sides and bottoms is definitely shown, and unless the general workmanship and the quality of fittings is also carefully considered.
6. It is important that all fittings and connections (particularly those coming in contact with coffee) should be heavily plated or tinned, to prevent corrosion or the contamination of coffee.
7. The use of combination urns is heartily endorsed, but care should be used to choose only such an urn as is very simple in operation—the simpler the better.

Remember these things about STEAM KETTLES:

1. The important features of steam kettles are: lasting qualities; resistance to corrosion; prevention of food contamination; correct design; sanitary qualities.
2. The finest kettles obtainable are made of pure nickel or monel metal. High cost has prevented their wide use, but they are a sound investment.
3. Copper kettles lined with heavy block tin are the most generally desirable quality now available, considering cooking qualities and durability. (A cheaper variation is the copper kettle with a thinner "wiped" tin lining, which consequently requires relining more frequently.) An additional feature that may be added to the copper kettle is a nickel plated exterior, beautiful in appearance and easier to keep clean.
4. Aluminum kettles are more widely used than any other type, due to their low initial cost. They do not require retinning, but their life is shorter than that of copper kettles, and in the end they are less economical. Aluminum kettles are sometimes nickel plated, which increases their value somewhat.
5. Cast iron kettles are the least costly of all, but do not measure up to the hotel's requirements for sanitary appearance and cleanliness. They are sometimes given an exterior covering of white enameled steel, which improves their appearance. It is not generally recommended to use cast iron kettles, however, except for soup simmering or grease rendering.



Welded
Boilerplate
Steel

VAN
Improved
Automatic
Steamer

Remember these things about VEGETABLE STEAMERS:

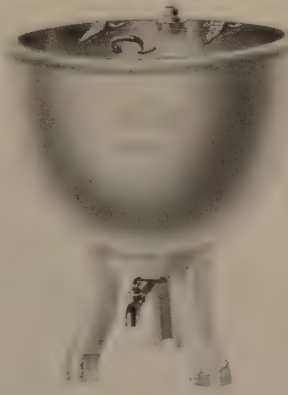
1. The important features of vegetable steamers are: quality of cooking, isolation of odors and flavors; safety to operators; simplicity; steam tight doors; cleanliness and absence of dirt-catching places; strength of doors, hinges, catches, etc.
2. Do not use a steamer which does not have automatic steam cutoff controlled by the opening and closing of doors.
3. A steamer of boilerplate steel construction is superior to one made of cast iron.
4. To avoid the danger of scalding the operators, use a steamer having a sliding shelf which automatically brings the food baskets out when the steamer door is opened.
5. Easy adjustment regulating the pressure of the door against gasket to take up compression is essential.
6. High grade steam regulating valves are an absolute necessity to guard against dangerous pressures and to prevent the mixing of odors.
7. Exhaust pipes should have water condensers to avoid obnoxious escape of steam and prevent unnecessary deterioration of the ventilation flue.



Aluminum Jacketed Kettle



VAN Copper Jacketed Kettle



VAN Cast Iron Jacketed Kettle



VAN Steam Roasting Kettle



VAN Refrigerated Counter of Metal Construction

Remember these things about STEAM TABLES:

1. The important features of steam tables are: correct design for the purpose; durability and quality of water pans and tops; quality of food receptacles; heavy rigid framework; heavy gauge sheet metal sides; resistance to corrosion or deterioration; strength of fabrication, bolting, welding, etc.; durability of plating, where used; ease of cleaning and absence of dirt catchers; heavy, easy-operating doors.
2. In cheapened construction, the things generally found to be sacrificed are: weight and rigidity of framework; weight and quality of sheet metal; quality of plating; reinforcement of top; quality and construction of water pans; quality of receptacles and refinement of finish. Each of these things shortens the life of the equipment.
3. Do not confuse steam tables having copper tops with those having tops of nickel silver or monel metal. Never consider those made with galvanized iron water pans.
4. Steam table jars, meat pans, covers, etc., may be had in varying grades and at widely varying costs. Take note whether these things are of equal quality when making comparisons.
5. In making price comparisons, do not fail to take into consideration all factors affecting quality. If you do not know these factors accurately, comparisons are meaningless.

Remember these things about REFRIGERATORS:

1. Important features are: constant maintenance of proper temperature; economy of ice or refrigeration consumption; proper internal circulation of air; airtight construction; proper type of insulation; heavy, tight fitting doors; heavy corrosion-resisting hardware; ease of cleaning; proper application of refrigerating machinery; proper internal arrangement for handling and storage of goods; absolute cleanliness.
2. Only an expert is capable of judging refrigerators. Even aside from quality of materials and construction (which are difficult to recognize) there are problems of refrigeration engineering which determine the satisfaction it gives, and about which the ordinary layman knows practically nothing. The reputation of the manufacturer should be the big determining factor.
3. Your engineering specifications will determine the size, capacity and general type of refrigerators, and should also cover the materials, thickness of insulation, etc. However, even with given materials, the methods and value of construction may vary widely and it should be understood that the skill, thoroughness and care of construction alone will make or break the job.
4. Compressed corkboard is the most desirable insulation in commercial use today. Ground cork or mineral wool, while used in cheaper boxes, should not be considered on an equal basis.
5. The consequences of cheap refrigerator construction are so serious and so costly that they will soon more than offset any difference in initial price.
6. Insulation which is either too thin, of poor quality or which is improperly applied results in food spoilage and in excessive cost of refrigeration.
7. Refrigerator doors which are insufficiently insulated, or which do not fit perfectly (either at first, or after some lapse of time) will likewise cause excessive spoilage and high consumption of ice or power.
8. These same troubles also are the result of various other things, such as walls which are not air tight, weaknesses in construction which develop after use, and incorrect principles of cold air circulation.
9. Besides these, such troubles as "sweating," warping and cracking, unsanitary conditions, etc., are the direct result of deficiencies of either

Three Standard Types of Steam Table Design



Steam Table with Open Stand



Steam Table with Enclosed Stand and Open Plate Warmer



Steam Table with Enclosed Plate Warmer

Important Features of Refrigerator Construction

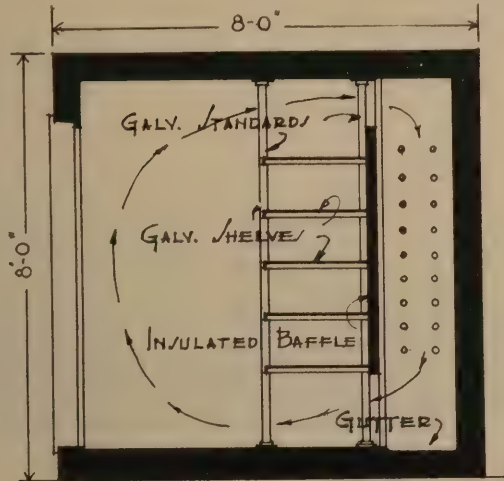
THE two standard kinds of construction are:

Sectional Wood Refrigerators, either of stock design or built to order. These are the most common type, having the advantage that they can be taken down and re-erected if the occasion requires. The great majority of service boxes are of this construction.

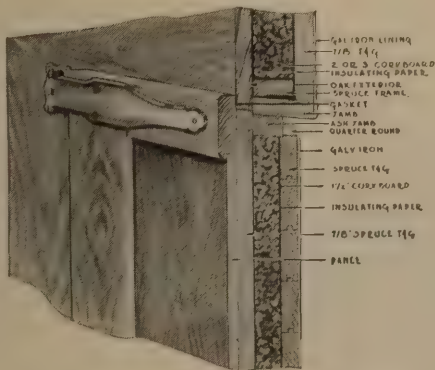
Cork and Cement Refrigerators. These are the highest class boxes and form a permanent part of the building. They are much used for storage refrigerators, and often in very high class installations, for service boxes, too.

Either type may be entirely satisfactory if properly constructed, designed and installed. Among the main

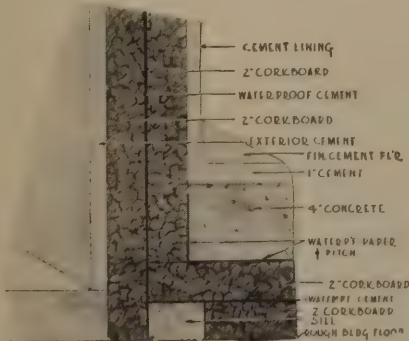
factors upon which a successful refrigerator installation depends are: (1) insulation of the best type and right thickness, (2) permanent airtight construction, (3) interior and exterior finish, (4) tight fitting doors, (5) durable hardware, (6) correct internal arrangement to permit proper air circulation and for food storage and handling, (7) correct application of mechanical or other refrigeration, (8) correct design for the purpose and (9) provision for easy cleaning. Every one of these features is of the utmost importance as the consequences of inferior refrigerator construction are so serious and costly that they soon more than offset any saving in price.



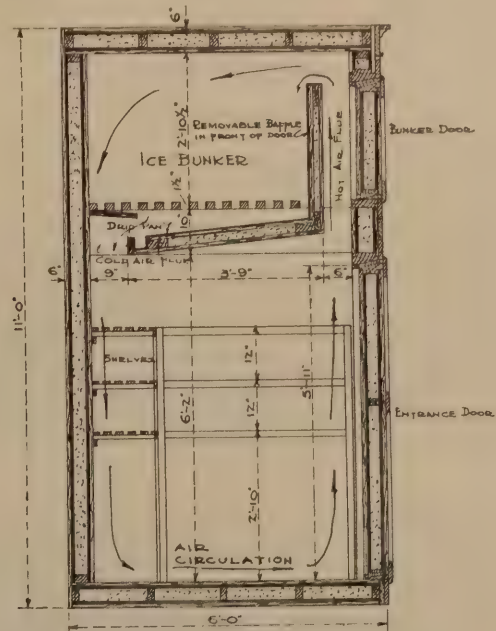
Cross section of a cork and cement refrigerator with wall coils, showing the principle of air circulation.



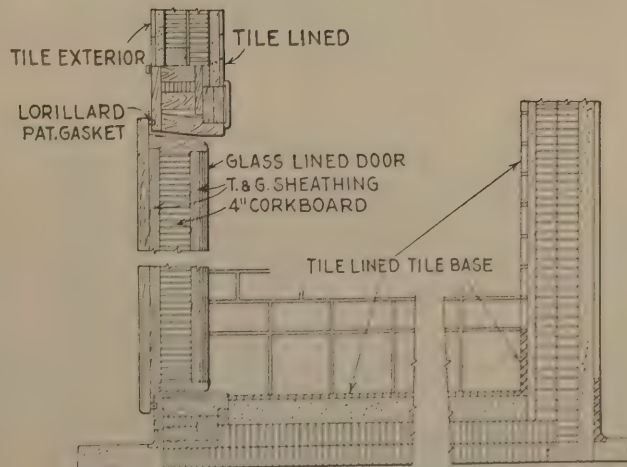
Sectional view showing the door construction used in Lorillard Sectional Boxes.



Sectional view showing Lorillard Cork and Cement Refrigerator construction.



Cross section of a sectional wood refrigerator with overhead bunker for ice or coils, showing internal arrangement and air circulation.



Sectional diagram showing the door, wall and floor construction of a very high grade Lorillard Cork and Cement Refrigerator. Note particularly the details of floor construction.



Lorillard Monel Metal Refrigerator in the D. L. & W. Station Lunch Room, Hoboken, N. J.



Lorillard Sectional Wood Service Refrigerator in the Hotel Savoy Plaza, New York



Lorillard Sectional Wood Meat Storage and Short Order Refrigerator in the Hotel Sherry-Netherland, New York



Interior view of a Lorillard Cork and Cement Storage Refrigerator in the Georgian Cafeteria, Boston, Mass.



Lorillard Cork and Cement Storage Refrigerators in the Edgewater Gulf Hotel, Mississippi City, Miss.



Lorillard Tile Exterior Service Refrigerator, Girard College, Philadelphia, Pa.

construction or materials, very few of which are to be detected by appearances.

Remember these things about DISHWASHING MACHINES:

1. Important features are: rapidity of action; thoroughness of cleaning; mechanical and operating simplicity; permanence of construction; arrangement to hold dishes in proper position to be thoroughly cleaned; sanitation and ease of cleaning.
2. Do not experiment with unknown or untried makes. Dishwashing machines are complicated mechanical devices which must be absolutely reliable day in and day out, or they will tie up the whole operation of the kitchen. There are
3. several makes which are outstanding in their success and which have proven their reliability, and your choice should lie with one of these.
3. A big factor in the selection of dishwashers and other machines of this type is the availability of service and repairs on short notice. Investigate such facilities before you buy, just as you would for an automobile.
4. In deciding the type of machine to buy, act only with the counsel of your kitchen engineer.
5. One of the largest causes of trouble in dishwashing is due not to the machines themselves, but to the faulty arrangement of dish tables. This not only slows up the machine's output, but increases labor costs. Good engineering is the solution.



Lorillard Cork and Cement Refrigerator, Girard College, Philadelphia, Pa.



Lorillard Monel Metal Refrigerated Counter in the D. L. & W. Lunch Room, Hoboken, N. J.

6. There is no doubt that in the end machines of copper or monel construction are more economical than galvanized iron machines in spite of their higher initial cost.

Remember these things about LABOR SAVING MACHINES:

1. The extent to which labor saving machines should be used in a kitchen depends upon (a) the size of the kitchen (b) the type of cooking to be done, and (c) labor conditions. Many so-called labor saving devices are of equally great value because of their saving of food or improvement of cooking.
2. Vegetable Peelers have proved their value so consistently that they may be considered almost indispensable. Besides being labor savers, they eliminate food waste to such a degree that they pay for themselves by that alone.
3. Chopping Machines are used for cutting and chopping meats, vegetables, fruits, nuts and various other foods. Besides their labor-saving value these machines may be said to improve the quality of food by the elimination of mashing, tearing or squeezing the juice out of foods while chopping them. They also facilitate the satisfactory use of remnants and leftovers—thus saving food.
4. Mixing machines are among the most generally useful devices in the kitchen. Their main purposes are dough mixing, egg and cream whipping, potato mashing, puree making, crushing fruit, etc. They are often equipped with accessories such as meat grinders, and coffee grinders. Like potato peelers, mixers are valuable in almost any kitchen.
5. Bread and meat slicers are made for both hand and motor power. They combine saving of time and labor with saving of food due to their uniformity of slicing.

Three Standard Types of Metal Lunch Counters



Steel Frame with Glass or Other Decorative Panels



Steel Frame with Porcelain Enamelled, Wellsville or Painted Steel Panels

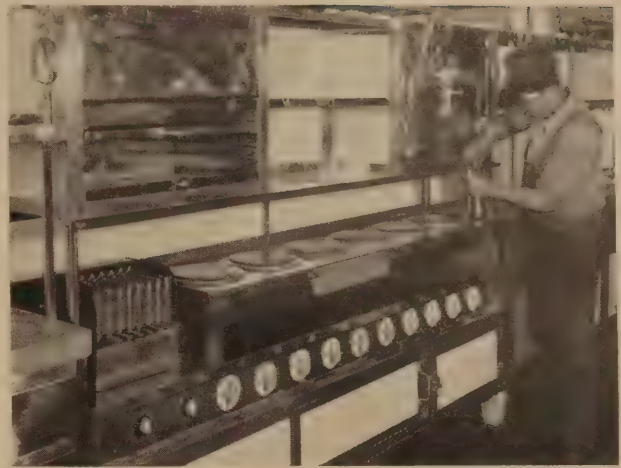


Table Height Lunch Counter Made with Various Constructions

6. Toasters have improved tremendously in the past few years and are among the most widely used of kitchen accessories. The best toasters are automatic and they save time as well as give greater uniformity to the toast.
7. There are many other devices in more or less general use, ranging from automatic egg-boilers to fruit parers. The advisability of their use is dependent upon the conditions in your kitchen.
8. Remember that the choice of size and type of machines is of vital importance, and that this should always be handled with the guidance of a kitchen engineer. Do not experiment with machines which have not proved their reliability. In every case there are satisfactory standard makes which may be safely relied on.

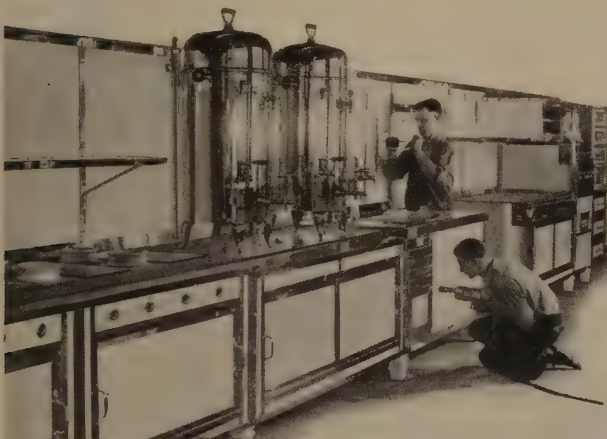
Remember these things about KITCHEN UTENSILS:

1. Important features are: high conductivity of heat; lasting qualities; wear and dent resistance; high resistance to deterioration; ease of cleaning.
2. It may be taken as an axiom that only utensils expressly made for restaurant and institution kitchens should be considered. Household grades are utterly impractical.
3. The principal grades of utensils in the order of their cost are—Retinned Steel Ware, Enamelware, Aluminum Ware, Cast Aluminum Ware, Copperware (retinned), Stainless Steel Ware, Bi-Metal, Monel and Nickel Ware.
4. Of these grades, Nickel, Copper, Bi-Metal and Aluminum rank highest in heat conductivity; Monel, Nickel, Stainless Steel, Bi-Metal and Copper in lasting qualities and resistance to dents and wear; Monel, Nickel, Bi-Metal, Stainless Steel and Copper, in resistance to deterioration; Enamelware, Stainless Steel, Bi-Metal, Monel and Nickel in ease of cleaning.
5. Monel, Nickel, and Bi-Metal utensils are undoubtedly the finest to be had, excelling in practically every quality. High initial cost, however, has kept them from wide use, so far.
6. Stainless Steel utensils are an innovation and are not as yet made in the full variety of necessary shapes. Where it has been used, Stainless Steel has proven highly satisfactory and extremely durable.

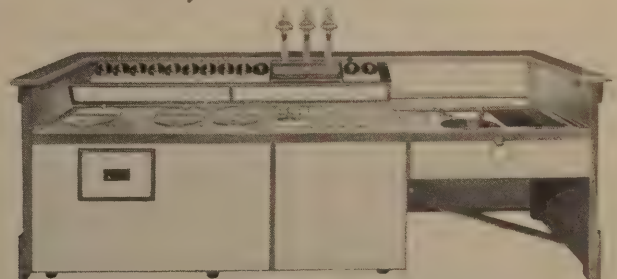


High Grade Electric Short Order Range for a Lunchroom Back Counter—Porcelain Enamel Steel with Nickel Silver Trim

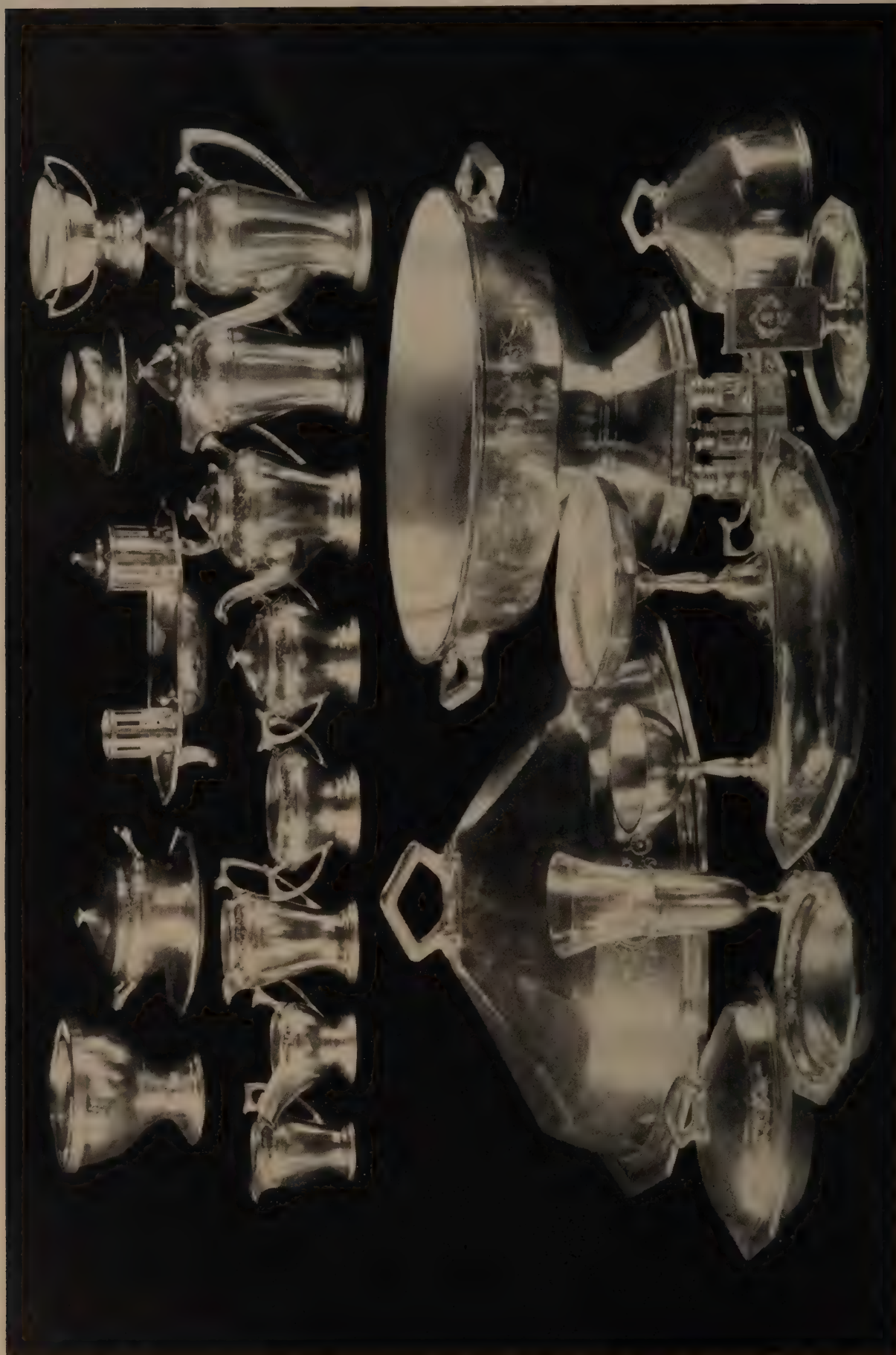
7. Retinned Copperware for many years has been the preference in high grade kitchens. The necessity for retinning the ware periodically is a disadvantage, but this is offset by its long life and other splendid properties. It should be understood, however, that copper utensils are not all of equal quality.
8. Aluminum ware, as every one knows, is very popular. Its lower resistance to wear is its main disadvantage, and for that reason copper and other higher priced utensils are gaining in popularity. Aluminum ware, however, is good in general cooking qualities, easy to keep clean and low in upkeep, and may be considered satisfactory. It is made in several qualities, and one should not confuse high grade heavy-weight ware with semi-heavy and light-weight grades. Heavy cast-aluminum utensils are equal or slightly superior to stamped and spun aluminum ware, and generally cost slightly more.
9. Retinned Steel utensils are not considered as satisfactory as the higher grade wares, although much used on account of their very low initial cost. They will last a long time, but must be retinned periodically to keep them in condition. They are very heavy to handle, and their cooking qualities are not of the very best.
10. Enamelware should not be considered except in kitchens of exceedingly small size, as there is no ware made, which will satisfactorily stand up under the strain of volume cooking and constant use. Only the heaviest quality should ever be used, and while there are inferior grades which cost approximately half as much, they are actually less economical.



Section of Back Counter Equipment for a Large Lunchroom



Modern Type of Soda Fountain Equipped for Mechanical Refrigeration



Silver Service for The Belden-Stratford Hotel, Chicago—Designed and Manufactured by The PICK-BARTH Companies.

Some Thoughts About Silver Service for Hotel Use

Silverware, to a guest's mind, is a measure of a hotel's character. If a man is fastidious about anything, he will be about table silver for the good and sufficient reason that he must actually put it in his mouth. He wants it to be absolutely clean. Half the time he doubts that it actually is as clean as he would like. Therefore, above all he wants it to *look* perfectly bright, shining, spick and span. Even then he often tries to make doubly sure by vigorously wiping his knife, fork and spoon on his napkin before using them—a thing every restaurant operator sees his guests do every day, and not a complimentary thing either.

A restaurant man makes his profit by satisfying people's appetites. Could he possibly do anything more harmful to his business than to offend those appetites with distasteful table service—before ever food is brought to the table? Any caterer who lays worn, battered or discolored silver service before a patron is performing a conspicuous act which is an affront to self respect and good taste.

The wise course is for a hotel man to capitalize upon his guest's fastidiousness—not to lose because of it. Attractive silverware can be an asset to as great a degree as poor service is a drawback.

Silverware as a matter of fact should be made a most profitable factor in the "merchandising" of a hotel's food. A grocer gets a better price for food by selling it in an attractive package. A restaurant can get better prices for food by serving with attractive linen, china, glass and, particularly, silver.

If silverware is to be an asset, it of course must have an appealing design and finish, and to do the industry credit, almost all silverware does look pretty good—*when it is new*. But after about one day's service, it *isn't* new and that is when trouble begins. The punishment of silverware in the course of handling by waiters, bus boys and kitchen help is almost incredibly severe. It alone is sufficient to wreck ordinary ware in almost no time. The cleaning and burnishing methods are equally destructive. And the effects of many other things done in the course of restaurant service—excessive heating for one—are additional burdens to bear.

Hotel silverware, therefore, to a degree not exceeded in any other commodity, must be a product made ex-

pressly for hotel use. It must be of special shape, design, weight, structure, plating and finish or it is impractical. Its manufacturing process is a special business by itself and that a factory may be highly successful in the production of domestic ware has little to do with its ability to produce hotel service.

If hotel silver is made the way it should be, it will be a real investment with a life of many, many years. If it is of inferior quality it may cost only half as much or even less, but its durability is so far lower than its comparative price that there is no longer the slightest doubt as to the ultimate economy of the higher grade product.

And when we are referring to the cheaper wares, let it be understood that we mean the cheaper types of hotel and restaurant silver, and that domestic grades are not to be considered at all. Household silver may and may not be excellent from the standpoint of plating, but in strength, design and finish it is far from having the special features required by restaurant service.

The quality of silver plated ware depends upon:

1. The metals used in making the body of the ware.
2. The design of the body, its shape, thickness, etc.
3. The way the body is made, the strength of joints, the general workmanship.
4. The weight of the silver deposit and the skill used in plating.
5. The finishing process.

The general term "silver plated ware" includes several grades which are so unsatisfactory for hotel and restaurant use that they should not be considered by the purchaser at all. The only one necessary to mention here is the kind of silverware which is plated on brass. Brass base silverware was widely used years ago in cheap eating places and even today is sometimes found, but it is so very unsatisfactory that it has practically died out. This ware is unsanitary and when worn is very unsightly and unpleasant to the taste. It has nothing to recommend it, and even those seeking the extreme in cheapness can do better with superior wares.

There are two metals used in making the blanks of silverware—Nickel Silver and White Metal or Britannia



Silver Service for The Standard Club, Chicago.



Silver Service for the Hotel Missouri, Jefferson City, Mo.

Metal. (Knives, which are made with cutlery steel blanks, are an exception.)

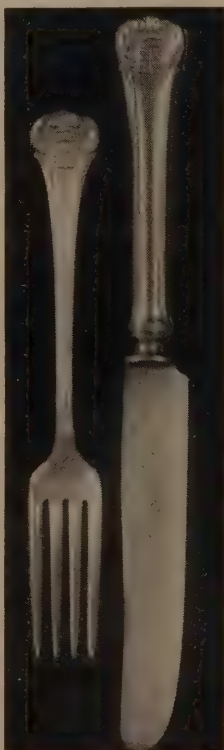
White Metal or Britannia Metal is composed mostly of tin, with a small addition of antimony and copper. The original formula, 210 parts tin, 12 parts antimony and 4 parts copper, is varied to suit the ideas of individual manufacturers. The alloy thus produced is somewhat like silver in color and is easy to fabricate, but because of its high percentage of tin it is a soft metal and melts at a fairly low temperature. White Metal, therefore, is entirely too soft for flatware and finds its commonest use in spouts, handles and other "mounts" for ware having a Nickel Silver body.

Nickel Silver is a hard strong alloy containing about 18% nickel, 65% copper and the balance zinc and lead and antimony. It is not a very easy metal to work with, as it comes near to rivalling steel in hardness, but this same fact means that it produces a highly durable product. All manufacturers do not use Nickel Silver of the same

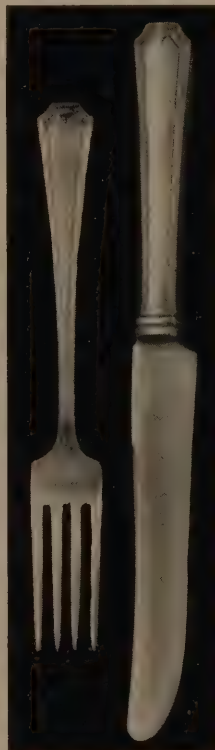
composition. Reducing the proportion of nickel to as low as 6% to 8% makes it lower in cost and easier to work with. This, however, reduces hardness and durability. In order to establish a known standard of quality, the percentage of nickel should be stated. Good ware will be guaranteed to contain 18% nickel.

Nickel Silver is used as the base for all hotel flatware except knives. In the best quality of Hollowware the entire body is made of Nickel Silver although, as explained before, cheaper ware may have White Metal spouts, handles and other similar parts.

Silver Plating. There are several methods of covering the base metal with silver, but all commercial ware is electroplated. Electroplating sounds like a simple operation but actually it is far from it. Keeping a plating solution in perfect condition so that it will form a deposit in the proper manner is a highly delicate piece of business and calls for men who are chemists, metallurgists and electrical experts combined. For one thing, the rate of speed



Silver service for the Hotel Book-Cadillac, Detroit, Mich.



Silver service for the Hotel Roosevelt, New Orleans, La.

A Comparison of High Quality Silver Hollowware with Hollowware of Cheaper Construction



This diagram illustration shows the superior points of design and manufacture of a high grade silver Coffee Pot.

1. All mounts, such as handle, spout and lid, are of the same heavy nickel silver as the body of the pot.

2. All mounts, hinges, base and knob are soldered on with silver solder making the whole pot one piece of silver.

3. The body is made of extra heavy nickel silver containing 18% nickel.

4. The silver plating is extra heavy and will not peel off.

5. Heavy reinforced foot which gives the pot a firm heavy base hard to overturn.

6. Reinforced spout, especially designed to prevent dripping.

7. Shoulder reinforced with an applied mount.

8. The inside of the pot is streamline design without corners or crevices and therefore easy to clean.

9. Strong, efficient insulators which will not deteriorate.

10. An unusually heavy reinforced hinge.

THESE two illustrations show graphically the false economy of buying silver hollowware on price alone rather than by the various points of quality that are built into it. Outwardly these two pots are of similar appearance, yet their wearing qualities are greatly different due to the difference in design and manufacture. The cost of the pot shown below is approximately 50% of the one above, but its length of service will average only about 20% of that of the better pot, the usage of the two being equal. Public service silverware must not only present a good appearance, but also must be of the sturdiest construction to withstand rough treatment.

This diagram illustration points out just how cheaper construction affects the various points of design that are listed above.

1. Handle and spout are of white metal rather than nickel silver.

2. All mounts, hinge and base are soft soldered instead of silver soldered.

3. Body of lighter weight nickel silver.

4. Silver plating is of lighter weight.

5. Bottom is just a disc of metal soft soldered in rather than being in one piece with body of pot.

6. Spout is not reinforced and is not non-dripping.

7. Top of pot is not as heavily reinforced.

8. Inside of pot has corners and crevices which are harder to clean.

9. Lighter and less effective insulators.

10. Lighter weight hinge.



A Few Examples of Fine Silverware

Manufactured by the ALBERT PICK-BARTH COMPANIES

Hotel Bismarck, Chicago.



Hotel Roosevelt, New Orleans, La.



Hotel Chase, St. Louis, Mo.



Bankers Club, New York.



Standard Club, Chicago.



Hotel Warwick, New York.

of the deposit is claimed to influence durability; the slower the plating the more lasting it will be. Preparing the pieces for electro plating is important, too. The surface of the base metal needs to be absolutely clean and free from dust, grease or foreign matter of any kind, and even the touch of a finger to an article before it goes into the plating solution, will leave enough grease to cause trouble. The result is blistering and peeling of the silver plating—a serious defect in the ware.

Electro plating on metal is like painting wood. Either can be done hurriedly and cheaply, but the results of careful painstaking work in both are more than worth the extra cost.

The amount of silver deposited per square inch of surface cannot, of course, be seen by examining the finished product. As a matter of fact, there is only one way to determine this, and that is by “stripping” the silver from the article by a chemical process and weighing it. As this is a means which few can employ, it is particularly important to deal only with manufacturers of unquestioned integrity who will specify the grade of their products exactly and guarantee them to live up to specifications.

The finish that should be given to hotel silver is entirely different from that used on household grades. The mirror polish of household ware must give way to one which does not show the effects of marring and hard wear. The usual method produces what is known as a “Butler finish,” which has a pleasing lustre of great durability.

Hotel Flatware

Hotel and Restaurant Flatware, as has been stated, should have an 18% Nickel Silver base, except for knives. The solid handle knives have blanks made of a single piece of cutlery steel. Hollow handle knives have a Nickel Silver handle and a cutlery steel blade. Stainless steel has come into great popularity, and where it is used for blanks, the knife blade is left unplated.

The shapes and designs used for flatware are not at all the same as for ordinary household products, although the difference is not always noticeable. The blanks should be heavier throughout and reinforced with exceptional strength at the points of strain, as illustrated on page 420 of this chapter. The design and pattern require a great degree of simplicity so that there will be no places to catch dirt and so that the entire surface may be kept burnished and polished free of any suggestion of discoloration.

Flatware should be accurately specified as to its thickness of plating by the manufacturer, and the buyer should understand the meaning of the various trade terms employed.

The grade generally used as a measuring stick is a medium low priced quality known as *A1 Plate* or *Standard Plate*. Solid handle dinner knives or dinner forks of this quality are supposed to strip 12 DWT (pennyweight) of silver to the dozen. Teaspoons should be 50 DWT per gross and Tablespoons 80 DWT per gross. Probably the majority of Standard Plate quality is made into plain or so-called Windsor design flatware although some of it is in pattern ware.

Half-Standard Plate is a still cheaper grade with only a very thin coating of silver. It should strip 6 DWT per dozen dinner knives with other pieces in proportion. This grade is made almost exclusively in plain ware, and is often confused with Standard Plate, as the two are almost indistinguishable. Half-Standard Plate is not an economical quality, although it is used a great deal in cheap restaurants and in places where silverware is likely to become lost. As spoons are lost more frequently than other pieces, many people use Half-Standard Plate Spoons with knives and forks of Standard Plate quality although the highest class operators do not advocate this.

Extra Plate or *Hotel Quality* silverware has a deposit 25% to 33⅓% heavier than Standard Plate. Solid handle dinner knives should strip 16 DWT per dozen and Tablespoons 100 DWT per gross. This is a very desirable grade and is one which is used by many of the leading hotel operators in this country. It can be purchased in many patterns.

Triple Plate Quality, however, is the leader of them all. Tablespoons in this quality should strip 240 DWT to the gross and other pieces in proportion. It is the best silverware investment to make where fine service is appreciated and ultimate economy is desired.

An additional feature which all hotel flatware should have is a reinforcement of silver on the bottom of the bowls of spoons and other places which receive the heaviest wear. This may be provided either by an extra plating or, in the case of higher priced wares, by the application of a piece of solid silver called a Sterling guard.

Hotel Hollowware

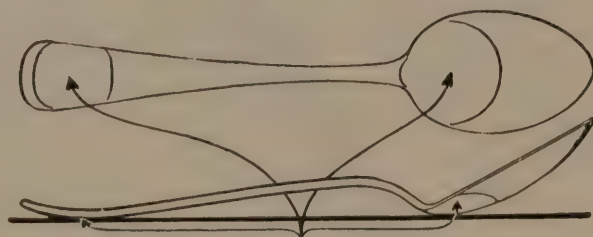
A large range of qualities exists in hollowware. As has been said, the blanks may be entirely Nickel Silver or a combination of White Metal mounts on a Nickel Silver body. The difference between these two grades is even greater than would appear upon first thought. The cheaper quality not only has less durable spouts, handles and other protruding parts which are subjected to much wear, but the mounts are joined to the body by “soft” (tin) solder. The strength of the resulting product is not to be compared with the steely-hard nickel silver mounts strongly fixed to the body with hard (silver) solder.

Furthermore, because soft-soldered ware with White Metal mounts is a much cheaper quality, it is naturally made in a less careful and painstaking way, thus still further lowering its value. Like Lime Blown glassware and Semi Porcelain dishes, it is essentially a price proposition. It is used a great deal and has its place in the scheme of things, but to compare it with ware having a Nickel Silver, silver soldered body is entirely out of place.

White Metal mounts are not only more easily damaged by hard knocks but they will not stand up under any considerable amount of heat and the mounts or borders of meat platters have been known to melt when placed on a hot range, a thing that is frequently done in the course of ordinary use.

As an article of hollowware is made of several pieces, its quality and strength depend upon the way it is put together as well as on its thickness and

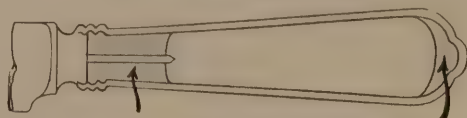
Essential Features of Design of High Quality Hotel Silverware



An extra reinforcing deposit of silver is put on the parts receiving the most wear, such as the handles and bowls of spoons and forks.

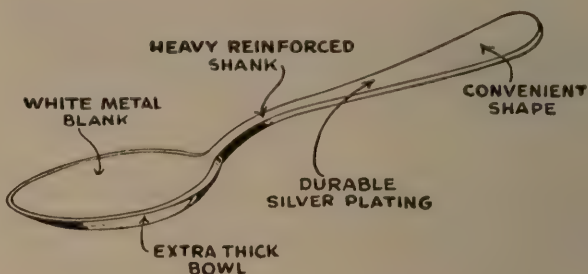


Fork tines are made heavier through the use of more metal and the points tapered at an acute angle to prevent hooking and bending.



The knife handles should be reinforced as shown to prevent loosening of blades also with extra weight in the end to prevent denting. Handles should be nickel silver shells silver soldered with blades of high grade cutlery steel.

THE various outstanding factors in the design of quality silverware for hotel use as shown on this page are typical of Pick-Barth silverware. Each of these illustrations shows points wherein hotel silver differs from the ordinary silver designed for domestic use. Extra reinforcement and heavier plating at points of wear in quality hotel silver assure longer life and continued good appearance for silver of this type. Pick-Barth Silverware is manufactured in a factory devoted entirely to the manufacture of high quality hotel silver.



The above illustration shows the various points of superiority of high quality hotel silverware over the ordinary type. Note how each part which is subjected to wear or stress is specially reinforced.

shape. One of the illustrations in this chapter indicates how a good ware is given special attention at every important point to reinforce it against the hard use it must withstand. Such care cannot be exercised in a cheap ware, but the value of the refinements is often overlooked. A cheap coffee pot may be nothing but a body stamped from a thin sheet of metal, with the addition of a handle, spout and cover, all flimsily attached. Yet, from superficial appearance, its quality may be very hard to judge. But place the piece beside a high grade pot of the type shown in the accompanying diagram and compare them point by point and you will begin to gain some real appreciation of their respective values. The strengthening of a hinge, the reinforcement of a spout, the improving of insulators, the elimination of rough edges or sharp corners, the addition of an inner ring cover, strengthening bands, a solid base and other features of this kind all cost real money and labor, but every one of these things is done because experience has proved their value.

The elimination of dirt-catching places in hollowware is essential to clean and sanitary service. It necessitates the careful rounding of all inside corners and the use of simple shapes and decoration.

Insulators on coffee pots and the like are a frequent source of trouble in inexpensive products. They are one of the most difficult parts to make. Either they do not insulate, or they become loose and wobbly. The best type are not only strong and efficient but are made of a mineral composition and therefore are not subject to rotting.

Crests, monograms, etc., are applied to flatware by stamping. In hollowware they may either be

stamped or etched on the body, but for a fine effect many prefer a crest in relief produced by mounting a special metal plate on the body before the piece is plated.

Silverware as an Investment

If there is any commodity that repays buying the best, it is silverware. Silverware should not break; it should not become destroyed. It can and ought to be about as permanent a thing as the hotel uses. Any silverware costs quite a bit of money—even the cheap grades. All silverware is expected to be an ornament to a hotel, even ten or twenty years after the hotel opens. If a sizable investment is needed anyway, surely it should be worthwhile to invest the added amount required to purchase the best, when you realize that every extra dollar will earn itself several times over in added service.

With the PICK-BARTH Companies this is not theory but is based upon many years as the leading distributors of silverware to the hotel and restaurant trade. It is based, too, upon their knowledge as manufacturers, for they own and operate the only factory in America devoted exclusively to the production of public service silverware. This factory has over a quarter of a century's experience in its line and its products have proven themselves second to none in value through long service in leading catering establishments.

A number of the services created by these skillful silversmiths are illustrated in this chapter and the long list of those who use PICK-BARTH silver reads like a roster of the country's successful hotel and restaurant operators.

Chapter XXII

Some Things a Hotel Man Should Know About Glassware

In order to select hotel glassware judiciously, a general understanding of manufacturing processes and materials is really necessary, as both have an effect upon quality which the uninformed man could not detect by examining the finished products. In this chapter, we therefore give a brief outline of the methods of glassware making, and while at times this may appear a trifle technical, we have endeavored to touch only upon essentials, with particular attention to processes which have a bearing upon things which are of importance to the purchaser.

There are two distinct kinds of glass used in making table ware—Lime Glass and Lead Glass. In both, the principal ingredient is silica, or sand. The purer the sand is, the better the product, and the very finest and most costly glassware is sometimes made of crushed rock crystal or quartz.

Lime Glass, in addition to the sand, contains lime and soda or potash as well as some minor chemicals. To these raw materials, a large quantity of broken glass (called "cullet") is added as a flux. This cullet should be of the same kind of glass that is to be made, although inferior quality glass is made with unselected miscellaneous cullet.

Lead Glass is made of a very high quality sand to which is added lead oxide, and also soda or potash, and cullet. The cullet in this case must be carefully washed and selected to eliminate impure or inferior glass.

Lead glass, because of its pure ingredients, is clear and colorless; Lime glass, because of impurities in the sand and lime almost always has a slight color—either greenish or bluish. Lead glass is sparkling in appearance and has a velvety smooth feel, while lime glass is not only less brilliant but must be polished more frequently to retain its luster. Lead glass is softer than lime glass and is heavier, much more elastic, and less brittle.

The Characteristics of Glass. The desirable qualities in glass are its brilliance, colorlessness, freedom from bubbles

and cloudiness and its resistance to the action of almost all commonly used liquids. These qualities are present in varying degrees in different grades of glass.

Glass, however, has two very great drawbacks; it is naturally very brittle, and this brittleness is heightened by the fact that glass is a very poor conductor of heat. When the results of these two characteristics are known, many of the things which happen to glassware are more clearly understood.

Glassware products are made while very hot, and in molten form. When the glass is cooled its poor heat conductivity makes the surface (or parts of the surface) harden more quickly than the inside, which causes strain or tension between different portions of the glass. In the making of glass products, it is a most serious problem to cool the ware in such a way as to minimize the danger of such a condition.

These two natural defects of glass also have a bearing on the way glassware performs in use. Its brittleness causes it to break with a very small impact. Its low heat conductivity makes it subject to quick breakage if it is exposed to rapid changes of temperature.

Manufacturing Process. Briefly, glassware is made by the following general processes: (1) the making of the glass itself, which may be done in pots or tanks as described later, (2) the forming of the product, by blowing or pressing, (3) the polishing and finishing of the product by various processes and (4) the tempering or annealing.

The best grade glass is made in a "pot" furnace, which consists of a vessel containing perhaps 800 pounds, heated by flames which surround it on all sides, access to the glass being through one small aperture. The material for one batch of glass is placed in the pot and when this is all used up, an entire new supply must be made. This is a disadvantage in point of time consumed, and



Glassware service for the Hotel Book-Cadillac, Detroit, Mich.



Three types of special crested DUR-NOK Glassware for (left to right) the Hotel Book-Cadillac, Detroit; Shoreland Hotel, Chicago; and the Hotel Columbia, Kalamazoo, Mich.



Methods of Applying Decoration to Glassware

The four glasses shown here are decorated by the following processes (left to right)—(1) Plate Etched Crest, (2) Pantagraph Etched Crest, (3) Needle Etched border, (4) Ground bands and Enameled nameplate. The Plate and Pantagraph Etched glasses show the same design and thus afford a comparison of the methods. It should be understood, however, that some designs may be produced in Pantagraph etching with perfect results.

also makes for more labor in withdrawing the molten glass, but its compensation is that the glass is all of equal quality and purity, and is unaffected by direct contact with the fire. Either lead or lime glass may be made by this method.

The other process makes use of a "tank" furnace which is a vat of glass heated both from below and by flames playing directly upon the glass. Unlike the pot method, this is a continuous process, new raw materials being added constantly to keep the tank at a given working level. These tank furnaces are immense affairs holding about 80 tons although there are smaller "day tanks" of about 8 ton capacity. While this is obviously a more economical method, a serious drawback is that it is not practicable to prevent the flames from deteriorating the quality of the glass, and for this reason relatively inferior raw materials are used. Tank glassware, then, is always a price proposition, regardless of what care may be given it in shaping, finishing, etc. Only lime glass is made by the tank process.

Practically all lead glass is made into blown ware; lime glass may be either blown or pressed.

Blown Glassware is made by dipping the glass from the furnace on a blow pipe. It is first roughly shaped and then is inserted into a mould and blown to its final form. The next stage is the annealing. This is done in a tempering furnace called the "lehr," which is divided into a number of sections graduated in heat so that a glass passing through them is heated almost to the melting point and then by slow stages cooled to normal temperature. Slowness is the important thing here, as it permits the glasses to re-heat and then cool so gradually that the expansion and shrinking of the glass progresses at the same rate throughout, leaving it free from surface or internal tension. Too speedy a passage through the lehrs is fatal to the glass, and very

poorly annealed glasses have been known literally to explode upon a relatively small change of temperature. The final stage is the cutting off, grinding, smoothing and melting of the edge.

Lead blown glassware is all made by hand. Most lime blown glassware is made by hand but tumblers can be made by a machine process. Machine-made blown ware, unfortunately, must be of tank quality glass, which prevents the use of machine processes for the higher grade wares. Lead blown ware when struck on the rim gives out a clear ringing note while lime glass has a comparatively dead ring. There is a difference, too, in the color. This can be seen by looking down on the rim of the glasses when they are set on a white surface. The lead blown will be practically colorless, but the lime glass shows a green, blue or pink tinge. Lead glass weighs noticeably more than lime, and the difference can be detected at once in glasses of equal size.

Pressed Glassware is made of lime glass. Pot quality is the best. Here the glass is first shaped by a stamping operation in a mould and then is finished to its final shape by hand. The glass is next subjected to various treatments of fire polishing, which not only gives a brilliant polish, but partly tempers it. This process almost always necessitates the grinding and polishing of the bottoms of tumblers and similar items. Finally it goes to the lehrs for annealing. Hand made tank ware is made exactly the same way, the only difference being in the quality of the glass, but in many cases the finishing processes are cheapened. Fire polishing is frequently less perfect as the glasses are sometimes polished only part of the way down. This may be detected by the fact that such tumblers will have a smooth bottom, not ground. Tank quality pressed tumblers may also be made by machine at a much lower cost. Machine made

ware, however, receives no fire polishing and exhibits other defects due to the larger sized furnaces used and to inferior finishing processes.

Pot quality pressed glassware has a much higher lustre than tank quality and runs more colorless and transparent. Tank quality hand made products usually will be off-color and will show a degree of cloudiness because of its poorer polish. Machine made glasses will not have a highly polished surface except around the rim where the edge has been smoothed by fire, and will exhibit a murky appearance.

Pressed Stemware is all hand made, but may be either pot or tank quality. The best stemware is clear and free from bowl seams, and has a foot which is smoothed and polished carefully (known in the trade as "finished cup foot"). Cheaper grades have a visible seam extending over up the bowl, stem and foot called an "unfinished cast foot." This cast foot shows a rough seam not only across the top of the foot but on the rim, making it much less desirable and liable to cut hands or towels.

Decoration of Glassware. Designs may be applied to glasses either in the form of bands and borders or as crests. The best method etches the decoration right into the glass with a powerful acid. This is absolutely permanent. Bands and lines may also be ground into the glass, giving a dull white appearance—also permanent. Then, there is an imitation of the ground band called an "enameled band," formed by a baked-on enamel. This looks the same as the ground band at first, but is not a permanent decoration, as the enamel wears off in time.

Crests and badges, according to the character of the design, may be etched in two ways. "Plate etching" is the more expensive, but produces very beautiful effects, some of which can be obtained by no other means. "Pantagraph etching," a less expensive process, may also be used. (This is the



Stuck Stem

Drawn Stem

Two Ways of Making Blown Stemware

In the glass on the left, the bowl and the stem and foot are made separately and united at the base of the bowl (called "stuck stem"). This joint usually is visible, but sometimes only with great difficulty. Without doubt this joining point is a weak spot in the glass. The glass on the right has the stem formed by drawing glass down from the bowl in one piece ("drawn stem"),—a newer process claimed to give greater durability.

same as the process employed for most etched bands.)

It is an excellent method but cannot produce some of the effects given by plate etching. A still less expensive way to apply crests is by the enameling process, but this, as explained, is not permanent and is not recommended for hotel use.

It must be understood that in the foregoing discussion, we have omitted mention of any except the commercial types generally in hotel use.

Glassware service in hotels is a simpler problem than many others. It really resolves itself in two phases—Appearance and Durability, without such complications as upkeep, deterioration and depreciation to confuse the issue.

No one will deny that blown glassware makes a more pleasing service than pressed ware. The main question, then, seems to be that of durability.

In order to form any opinions concerning durability, the causes of loss must be understood.

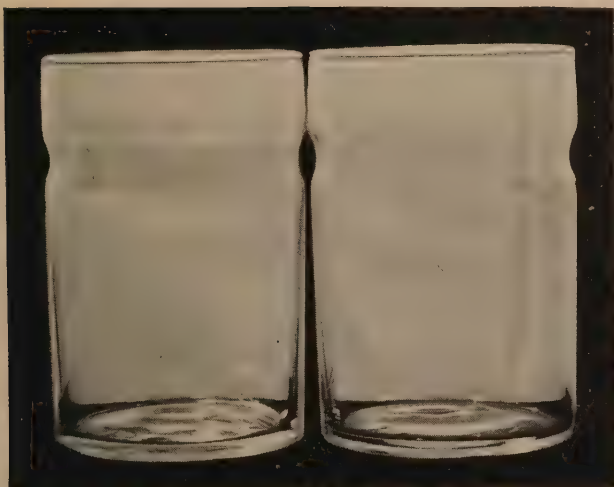
There are three main causes of breakage—
(1) accidents, (2) carelessness and roughness and
(3) changes in temperature during washing.

Rapid heating or cooling is ruinous to any glassware that has not been perfectly tempered. Yet with modern dishwashing machinery, the glasses (often very cold from having contained ice water, ice cream, etc.) are instantly plunged into boiling hot water. This cannot be materially changed as long as machine washing is employed. Some hotels report that they have reverted to hand washing, presumably in cooler water, to reduce their glassware losses, but it is still a question whether the saving is great enough to offset the higher labor cost. The majority of hotels undoubtedly will always wash by machine. This being the case, there is only one answer, and that is to use high quality well tempered glassware. And, if we are to accept the verdict of most hotels, lead-blown glass is definitely superior to lime blown for the purpose, just



"Prince Rupert's Drops" Show Why Glassware Needs Careful Tempering

Prince Rupert's Drops or "Dutch Tears" form a well known experiment in Physics. They are formed by allowing drops of molten glass to fall into cold water. The surface of the drops hardens instantly and forms a shell which prevents the inner glass from shrinking as it cools, causing it to solidify in a dilated or stretched condition. A tremendous strain of forces is thus set up between the surface and inside glass. Breaking a tiny piece off the tail of the drop is sufficient to destroy the equilibrium of these pent-up forces, and the drop shatters to dust with explosive violence. The danger of this in glassware making can only be averted by careful tempering or "annealing."



"DUR-NOK" Breakage-Resisting Glassware

This ware is of a special patented shape which gives the glass increased structural strength, and reduces chipping. It is a specialized hotel product made of heavy lead blown glass of very fine quality and is made both in tumblers and stemware. Many users report that "Dur-Nok" glasses have substantially lessened their breakage, while giving them appearance in every way harmonizing with high class catering.

as "pot" quality pressed glass excels the "tank" product.

Accidents, carelessness and roughness are accepted by most hotel and restaurant men as natural evils of the business. Everyone hopes to see them remedied, but it has to be realized that volume food service cannot be carried on with the same carefulness as in a private home. It simply isn't human to expect it. If carelessness and accidents cannot be eliminated, glassware must be used which will defend itself against them.

What qualities enable a glass to stand up best under this use and abuse? Two of them, *quality of glass* and *temper*, we have already pointed out. *Thickness* is a third, which needs little comment. In addition to these three, there is one important element which so far we have not discussed, and that is *shape*.

Probably the earliest attempt to reduce breakage through the use of a special shape was by the introduction of barrel-shaped and other "no-nest" styles. These styles quickly proved their value and now the majority of pressed tumblers are made on this principle.

Dur-Nok Breakage Resisting Glassware. On this page we illustrate a ware of special shape, called DUR-NOK Glassware. These glasses are made with a groove somewhat below the rim, which has the effect of strengthening the glass structurally to such a degree that it is able to withstand shocks and hard knocks which would easily smash an ordinary product. Another feature is that the diameter at the rim is smaller than the main diameter of the glass. Due to this, the liability of chipping is reduced when glasses strike one another or tip over, because the body of the glass and not the edge receives the blow. Added to these mechanical advantages is the fact that Dur-Nok glasses are made of very fine lead blown glass, carefully finished and tempered, and, better to withstand restaurant service, are made somewhat thicker than the ordinary blown ware. Dur-Nok is in every sense a specialized product and is extensively used in hotels and restaurants throughout the country. Both laboratory tests and the opinion of its users demonstrate it to be of exceptional durability.

Both stemware and tumblers may be obtained in the Dur-Nok shape, and crests and decorations may be applied just as any ordinary blown ware. Dur-Nok glassware is also made in colors with attractive optic effects.

The advantage to be gained in using a special shaped glass of this kind is that with it a hotel may keep its breakage within a low figure and still present to its patrons a service of blown ware compatible with high class catering.

The PICK-BARTH Companies are the largest distributors of hotel and restaurant glassware in America, and in addition to their immense merchandise facilities are in a position to be of valuable service to hotel operators through experienced counsel on all phases of the glassware problem.

Glassware Service From Well Known Establishments

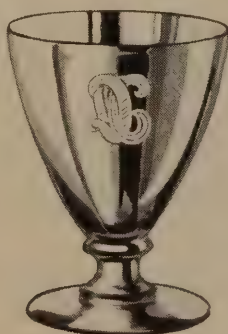
Supplied by The PICK-BARTH Companies



Hotel Plaza
New York City



Hotel Book-Cadillac
Detroit, Mich.



Denver Club
Denver, Col.



Blackstone Hotel
Chicago, Ill.



Hotel Mayflower
Washington, D. C.



Drake Hotel
Chicago, Ill.



Chinaware Services for the Hotel Book-Cadillac, Detroit—by The PICK-BARTH Companies

Safeguarding Your China Investment

Solely from the standpoint of the initial amount of money involved, chinaware demands attention as one of a hotel's major buying problems. Impressive though it may be, however, the initial investment is really less significant than two other things—the character of service presented to the hotel patrons and the yearly cost of china replacements.

No hotel can pretend to high class catering and lay before its guest a type of dinnerware reminiscent of a "greasy-spoon" eating place. A person's appetite is too temperamental a thing not to be affected by such service. Psychologists even go so far as to claim that attractive china actually improves the taste of the food. That may be a little hard for the average man to accept, but of this there can be no question: good table service does unquestionably help a caterer to get better prices for his food, and that alone is enough to make appearance worth serious consideration by the most practical-minded of men.

China being what it is, and hotel service as it is, breakage and other losses are a real item in the cost of operation. In fact, it is hard to say with certainty whether china should be classed as an investment or as an expendable material.

No matter how hard you try to prevent it, china replacements are bound to run into money. Careful operation helps, but within practical bounds, its help is relatively small. If chinaware losses are to be held at a minimum figure, the biggest factor in doing so is in the wise selection of the ware to be used. The buying decision, therefore, assumes even greater importance, and, if it is to be a good one, requires good counsel and a pretty clear idea about the available wares on the market.

Without involving too technical a discussion, we will attempt to give an outline of the china wares in general use, together with a brief description of their qualities and adaptability to hotel service.

The Nature and Properties of Chinaware. The different kinds of china are distinguished, first, by the composition of the body or "paste," second, by the firing process, and third, by the minerals in the glaze. The principal divisions of quality are *Hard Paste Porcelain* and *Soft Paste or Artificial Porcelain*—or as they are more commonly (and somewhat inaccurately) known, *Vitrified China* and *Earthenware*.

Hard Paste Porcelain. The body of such china is composed of mixture of minerals, differing somewhat in the various potteries, the formulas generally being secret. Among the minerals used are Flint, Ball Clay (a special kind of clay largely found in England), Kaolin (a white earthy substance formed by the decomposing of granite-like rock, and containing considerable feldspar) and Spar (which contains feldspar, silicate of alumina and some other minerals). The characteristics of hard paste porcelain are: practically complete vitrification, hardness, smooth compact texture, non-absorbence

and a glaze which adheres stubbornly to the body. It may be translucent, but some is not, and this is not of primary importance. Most people call this china "Vitrified," no doubt under the impression that all of it is really so. This is a false impression. Good hard paste porcelain is actually vitrified or fused into a solid mass. There is, however, a good deal of other ware that is distinctly and visibly absorbent. Superior makes of hard paste porcelain have a hard glaze. Others have a glaze containing lead or other minerals as a flux to promote melting at a lower heat, which lowers cost, but produces softer glaze.

Hard paste porcelain, therefore, does not represent a single quality, but a group of wares having many of their main characteristics in common. To explain these differences more clearly, let us divide the wares into (1) the German type, and (2) the American type.

German Type China, or true hard-fired china as it is often called, includes most German and Austrian China, and also the ware produced by one American pottery. (French Chinaware which is similar, is not at present a serious factor in the hotel market.) The body of this china, of a fine texture and color, is fired at a low temperature, just enough to take out the moisture and shrinkage (about 1000° F.). After this, it is glazed and then fired at a very high temperature (about 2600°). These firings produce a body that is not only vitrified into a non-porous state, but which is fused so thoroughly as to make it almost approach glass. Due to the high temperature in the second firing, it is possible to use an extremely hard glazing mixture, which is fused solidly to the body. The result of this process is a ware of very great hardness, generally translucent, with a fine blue white color, and with a surface that is about the hardest to be found on any hotel ware. From the standpoint of perfection in "potting" German type china is generally very good. Warping of the body must be watched for in the less expensive grades.

American Type Vitrified China. This kind of china differs from the foregoing in that it has a body fired at a higher temperature (about 2100° to 2400° F.) and a glaze fired on at a lower heat (about 1800° to 2100° F.). What is the result? The body is fused into a non-porous state (or in some wares, nearly so) but does not make any such near approach to glass as the German type, and consequently is less brittle. The glaze is, however, not so hard nor always so perfectly fused into the body. Other characteristics vary to a great degree in different makes, and the first thing that must be understood about the term "American Vitrified China" is that it is a very flexible term and does *not* always mean that the china is literally vitrified at all. Some kinds of American china show an absorption which runs all the way up to the borderline of semi-porcelain. Within certain limits, this incomplete vitrification does not lessen strength; in fact it may even



Application of Decoration to Chinaware

No. 1 and No. 2 are simple underglaze patterns. No. 3 represents a very fine example of underglaze decorating of a type ordinarily rather difficult to apply by this method. Its colors are mainly soft in tone, but for underglaze work, the outlines are quite sharp. No. 4 is a design that has been applied both over and underglaze, with good results in both cases. No. 5 is overglaze, and No. 6 is underglaze in soft blues and greys. No. 7 is a brilliant example of overglaze decoration in many colors on German China.

increase it. However, it is usually accompanied by other qualities which render the ware less desirable. A high grade American type china will be perfectly non-porous and will have a good hard glaze which (while not so hard as in German wares) generally will not "craze," star or check. Less perfect American makes, although they may be as strong as the above, may have a poorer glaze, which is more likely to crack, craze and wear off and when this occurs it exposes the somewhat porous body to the absorption of grease and dirt. Cheaper American grades also are liable to be less perfectly "potted" than is desirable. The color of American china is usually a warm white, rather than bluish, and this color like other qualities is not the same in all makes.

Soft Paste Porcelain, (Semi-Porcelain or Earthenware) is often called Artificial Porcelain, because the minerals used in the paste are partly substitutes for those used in true china.

Earthenware has a body of materials that do not fuse solidly in firing, and therefore, it will readily absorb moisture (often as much as 10% of its own weight in water). Its body is noticeably granular, and has not the strength of vitrified china. The glaze is softer and chips away from the body more easily. Semi-porcelain is usually warm white in color, and is sometimes very beautifully tinted and decorated. Considered as a hotel ware, however, it is not very popular as it cracks, chips, breaks and discolors much more readily than vitrified ware. English type hotel ware is an earthenware body which is fired at a high temperature which gives it a certain vitrification and greater strength. It does not merit being classed with Vitrified China, as it is more porous.

"Potting" of Chinaware. "Potting," meaning the shaping of the pieces of chinaware, is a consideration which has apparently received less attention from the buyer than most other important qualities, probably because few buyers have the time or inclination to examine any large number of pieces. Where it is given attention at all, it is usually because the buyer wants to see the shapes and designs of the different articles in order to choose pieces of pleasing appearance. This, of course, is a good thing to do. Consideration of *uniformity* in potting is of equal importance. If a pottery is delivering as first class ware plates which are warped, cups which are not round and other misshapen pieces it sure is worth knowing. A good pottery culls out such pieces as seconds and if yours does not do this carefully you will actually receive a mixture of firsts and seconds. Imperfections in glaze should be watched for too, especially if the china is at all porous.

Shape and Strength. Most hotels use rolled edge plates. How many of them know that the biggest feature so far as strength is concerned is really not the rolled edge but the angle of the whole rim of the plate? It has been clearly shown that plates with a flat rim will chip much more quickly than those whose rim slants upward. Some like the appearance of a flat plate better than a deeper one, but it is a question whether there is enough difference to offset the increased chippage. A flat plate, too, is much more likely to warp out of shape in firing.

Much has been said of welded handles on cups, the idea being advanced that this design is stronger than a "stuck-on" kind. There is little to support this theory. Actually, a handle rarely breaks at the point of junction with the cup,—it is the handle itself which breaks. It therefore is the handle itself that needs the strength. If strongly made it should last well regardless of whether it is "welded," "stuck-on" or "block." If welded handles have proven strong it is probably because they are usually thick—sometimes too thick for the cups which consequently have a tendency to warp into an oval shape when fired.

Defects Which Develop with Use. Aside from outright breakage and chipping of china there are certain other defects which appear with use and render the china less desirable or even useless.

Absorption of dirt, grease or food liquids may take place through small imperfections or spots in the glaze.

"Crazing" may occur. This is the separating of the glaze from the body, forming small blisters, which cause small cracks.

"Starring" often appears. In this case a group of what appear to be cracks appear in the form of a star. This is due to a defect in construction on account of uneven distribution of thickness in flat pieces.

No really good Vitrified Chinaware should develop these defects in any appreciable number of pieces. If a ware shows discoloration of the body around a crack or glaze imperfection, it is not real vitrified china no matter what its label says.

Methods of Decorating China. Decoration may be applied to chinaware either under or over the glaze. As underglaze decorations obviously should wear longer than overglaze it is natural to wonder why underglaze decoration is not always used. The reason is that in firing the chinaware glaze, so high a temperature is sometimes attained that the colors in the pattern are affected, either fading or becoming entirely changed. Certain colors stand this high temperature better than others, black and certain shades of green being the best of all. Certain kinds of chinaware are fired at higher temperatures in glazing than others, and hence are more limited in their use of underglaze patterns. Thus in the German type of china, with its second firing at a terrific heat, it is impractical to use the underglaze process except for black and some greens. American type Vitrified China, being glazed at a lower heat, does permit underglaze decorations. Some colors, for example gold, can be applied only overglaze.

Overglaze decorations are more sharp and clear, and are brighter in tone, and many effects could be produced by no other process. It is undeniable that overglaze work wears off, some worse than others, but a well fired piece of overglaze work will give absolute satisfaction. If you are decided upon an overglaze pattern, therefore, it is worth your while to make a pretty thorough examination of the potter's work of this kind.

Underglaze decorations obviously will last as long as the glaze does. Of course, if your china has a soft glaze your service will deteriorate in appearance rather quickly. With a good hard glaze combined with underglaze decoration, you will get long

service. The colors in your decorations are likely to be weaker in many cases than in overglaze work, and sometimes will be blurred. If the design does not call for a sharp outline, and if soft colors are wanted, the results will be entirely satisfactory.

Now having made this brief review of the physical qualities of china, let us examine it with relation to the service it is to perform in a hotel. Just what does a hotel service demand of its chinaware? If it were a question purely of appearance, why, every man to his own taste. If it were merely a matter of resistance to outright breakage, the question of superiority would be simple to answer, because accurate tests can determine this. Vitrification, if the sole measuring stick, can be gauged to a hair line precision by scientific methods, and may be pretty clearly seen even with a rough test.

Obviously, what is needed is a combination of various qualities, all to the highest degree, but all will agree that there is no single ware that excels in every quality. Unfortunately, the very qualities which make a ware attractive from one standpoint, prove disadvantages from another. The problem therefore is to find the china which gives the most nearly perfect combination for your purpose.

The matter of choosing between different chinawares will always be based on individual preference because conditions and policies are not alike in different hotels, but there are some things about which most hotel men and china experts agree.

One of them is that semi-porcelain or other absorbent ware (regardless of what it is called) may definitely be classed as unfit for hotel service. It is unsanitary, it is poor economy in spite of its low price, and it does not present (nor retain) an appearance appropriate for the character of service a hotel may be expected to present to its guests.

A second thing to which practically all agree is that very thick and bulky china, while suitable for cheap eating places or institutions, is too unappetizing and too clumsy and unattractive to merit consideration.

Household grades and other very thin and delicate china are likewise taboo because of their prohibitively great breakage, although they are sometimes used for small private dining rooms.

These are all things which it is generally agreed should *not* be used. On the other side of the question—what *should* be done, opinions are much less in harmony. Most hotels use decorated china, and most favor half thick rolled edge wares, but when you go farther than that, you enter into controversial fields.

This leaves several important questions to be decided by individual preference, among which American vs. German Type Vitrified China, Partially Vitrified vs. Wholly Vitrified Wares, Underglaze vs. Overglaze Decorations and the comparative desirability of different shapes are the most important.

In forming your own opinions there are some known facts about the subject which will be helpful.

In the first place, chinaware losses as they actually occur in a hotel are not all from outright breaking by any means. Probably a fair estimate would be that breakage constitutes 50% or less of the total loss. The balance is made up of chipping, crack-

ing, starring, checking, absorption, discoloration and wearing of the glaze or decoration.

Second, it is pretty well established that the glaze on German Type china will outlast that on a majority of American Type wares by a considerable margin with the result that with the former some of the losses (such as starring, checking, absorption, discoloration and wearing of glaze) are lower.

Third, impartial laboratory tests have demonstrated that American Type Vitrified China is harder to break on a solid impact than German type, and that china which is slightly (but only very slightly) absorbent is stronger than either.

And last, that underglaze decoration is only as durable as the glaze is hard, and that only a few of the very best American Type wares produce a glaze of a hardness to compare in any way with German Type wares.

Overglaze decoration, on the other hand, varies

to a great degree in permanence and if poorly applied is not at all satisfactory. A comparison between underglaze and overglaze decoration from the standpoint of durability must therefore be specific, not general.

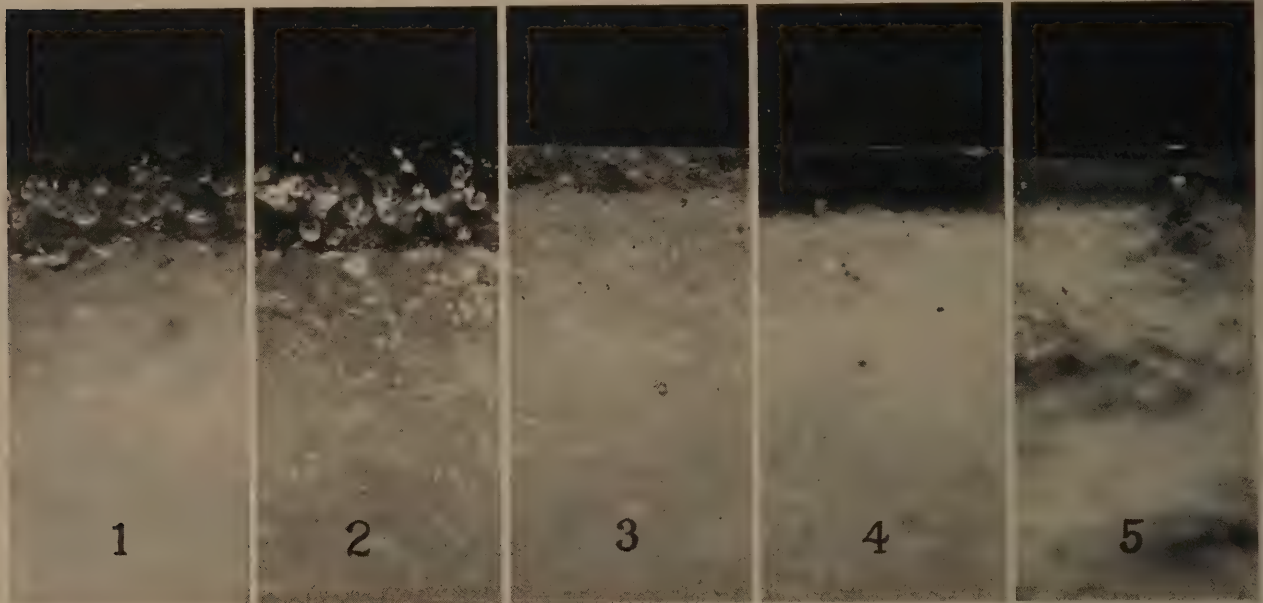
With these facts in mind, the selection of your china service becomes a matter of adjusting qualities to your individual conditions, and with your own preferences as to appearance in body and decoration.

The PICK-BARTH Companies, handling, as they do, practically every class of chinaware for hotel and restaurant service, and being the largest dealers in such ware in America, are in a position to give you unbiased help in making your decision, and place at your disposal a large staff of chinaware specialists whose many years of experience in hotel work make them the leading authorities on the subject.

What the Microscope Shows About Chinaware

Micro-Photographs, Magnified about 55 Diameters

These five photographs serve to demonstrate visibly the fact that clear differences exist even between wares of supposedly similar quality. The views are taken to show a cross section of the glaze and part of the china-ware body (the glaze may be easily identified as the somewhat transparent part just below the black space at the top of the photographs).



*German Type China
German made*

The body can be seen to be exceedingly clear, with the various component materials apparently almost all fused into a single substance of a somewhat glassy character. The glaze is thick and closely fused to the body. The tiny bubble-like objects in the glaze might be either air or some solid material, and are apparently characteristic of the German type glazing minerals and firing. Whatever they are, they do not have any known effect on the hardness of the glaze.

*German Type China
American made*

While this china is quite similar to No. 1, differences in body and glaze both are visible. In the body there are more of the white particles of matter which are undoubtedly solid substances which were never melted during firing. The ware, therefore, has a trifle less glossy structure. The glaze is of equal thickness and exhibits the same characteristics, but seems to be a little less clear than in No. 1. This ware is known to be given a slightly lower temperature in its second firing than the imported china.

*American Type
Vitrified China*

How different the body of this china is from that of the German type is easy to see. In this ware, the body consists of minute hard particles, which were not melted at any time during the firing processes, but which are cemented solidly together by the more easily fusible parts of the paste. The glaze here shows no resemblance to No. 1 or No. 2, not only being thinner but of a different consistency. It is, however, to all appearance quite thoroughly fused to the body. It may be noted that this is one of the highest priced American products.

*American Type
Vitrified China*

At first glance one would think this superior to No. 3, but this is an illusion. The body looks clearer than in No. 3, because it presented a rougher surface when broken, causing parts of it to be slightly out of focus. The glaze is thick and as clear as glass, due to the presence of lead in the glaze, which makes it much softer. The tiny cracks in the glaze, extending upward from the juncture of the glaze and body are a sure indication of the fact that the two have not been solidly fused together. This is the condition which later causes crazing.

*Semi-Porcelain Hotel
Ware*

See how uneven the surface of the body appears under the microscope. This piece was broken in exactly the same manner as the other samples, but parts of the surface are far out of focus. In spite of this, the extremely granular character of the body may be seen at a glance. The glaze presents an appearance similar in some ways to No. 4, and no doubt contains much lead. The hazy division between body and glaze indicates that the glaze has soaked into the pores of the body.

Improving Service With Cooking China

SERVING food in its original cooking container has many advantages and indicates a higher standard of catering. It is generally conceded that food is delivered to the guest in a more perfect and appetizing condition by this method, and it makes possible the addition of many attractive specialties to the menu. Patrons are quick to appreciate this refinement of service and usually are willing to pay more to secure it. Hotels should use only perfectly vitrified ware for this purpose, avoiding unnecessarily heavy or clumsy pieces. The Fraunfelter-Ohio Cooking China illustrated here represents about the ideal both from the standpoint of appearance and practical qualities.



China Teapot, Battleship Shape



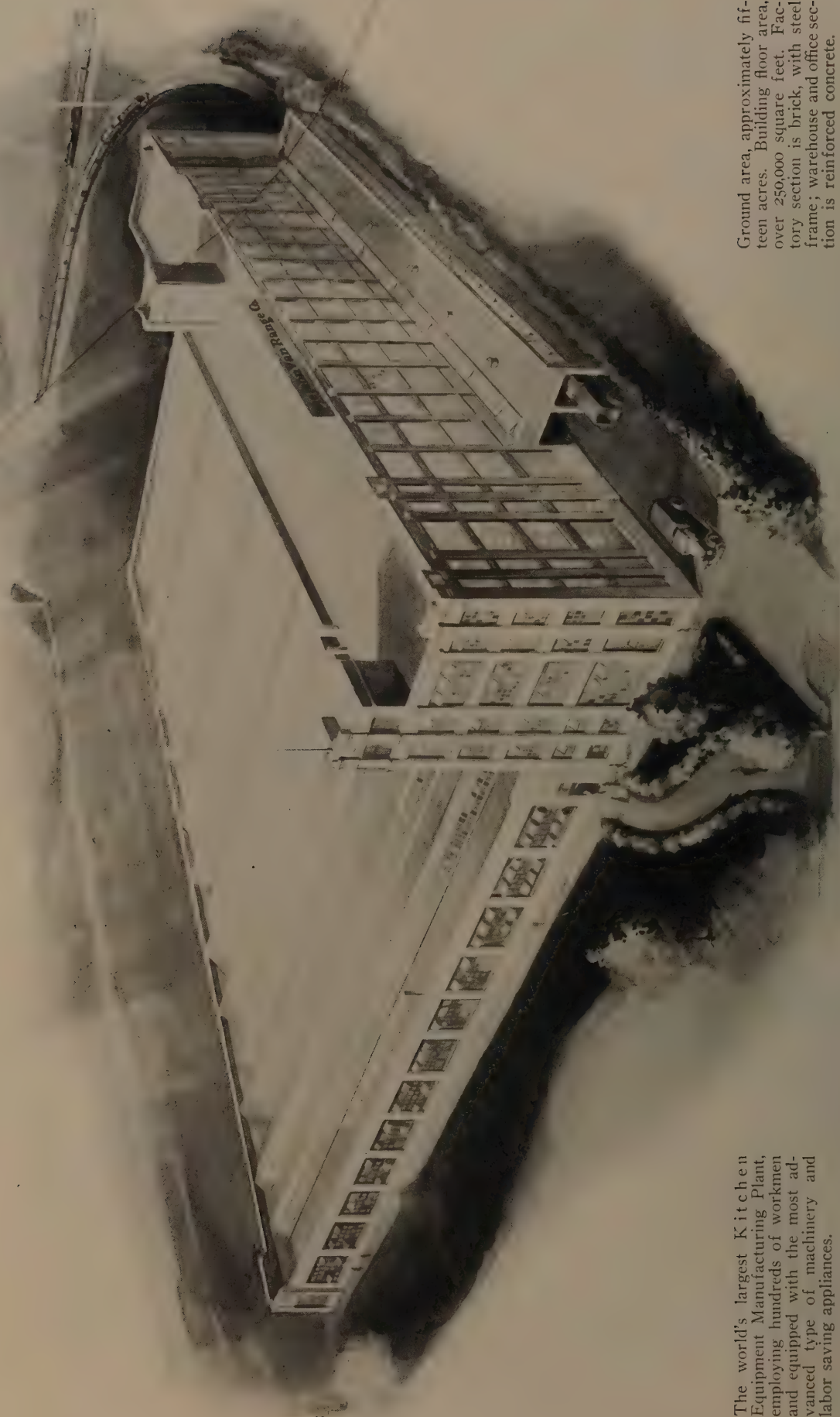
Round Casserole



Pot Pie or Pudding Dish



Au Gratin or Shirred Egg Dish



The world's largest Kitchen Equipment Manufacturing Plant, employing hundreds of workmen and equipped with the most advanced type of machinery and labor saving appliances.

Ground area, approximately fifteen acres. Building floor area, over 250,000 square feet. Factory section is brick, with steel frame; warehouse and office section is reinforced concrete.

The New Plant of The JOHN VAN RANGE COMPANY, Oakley, Cincinnati, Ohio
Manufacturing Division of the Albert Pick-Barth Companies

The Service and Facilities of The Albert Pick-Barth Companies

— Manufacturers, Merchants and Importers of
Equipment, Furnishings and Supplies for Hotels,
Clubs, Restaurants, Hospitals and Similar Institutions

THE Albert Pick-Barth Companies are comprised of Albert Pick & Company, Chicago, the Western Division, and L. Barth & Company, Inc., New York, the Eastern Division, with which are affiliated The John Van Range Company, of Cincinnati, Ohio, and the Lorillard Refrigerator Company, Inc., of Kingston, N. Y.

These four concerns, each for many years supreme in its own field, and now united under common ownership, form an organization which is unquestionably the leading business of its kind in the world, with more than 125,000 customers, and total annual sales of over twenty-seven million dollars.

This does not merely mean leadership in size, although it should be significant to you that our sales are many times as great as those of any concern in our line of business. What is even more important is the outstanding superiority of the Pick-Barth merchandise, manufacturing facilities and resources, as well as the experience and skill of our service organization.

The success of the Pick-Barth Companies has been built upon the solid foundation of over half a century of catering to the needs of Hotels, Restaurants and similar establishments. Throughout these long years of experience we have devoted our efforts exclusively to this field. Their problems have been our problems; to them we have given constant study. Our entire business has been organized with the single purpose of serving them.

In the development of our lines of merchandise we have been guided by one policy—to provide our customers with products of a character specially designed to satisfy the peculiar requirements of catering to the public. Our experience has taught us what those requirements are and our search for the desired merchandise has not only extended to the markets of the whole world but has led us to the invention and development of a great many important new products which are now in wide use and whose creation in numerous cases has been of revolutionary importance.

Our lines of merchandise include everything required to furnish and equip a hotel, comprising over thirty thousand products, including: Furniture, Lamps, Objects of Art, Carpets, Rugs, Linoleum, Draperies, Window Shades, Bedding, Uniforms, Table Linens, Chinaware, Glassware, Silverware, Kitchen Equipment, Kitchen Utensils, Refrigerators, Cafeteria Equipment, Lunch Room Equipment, Soda Fountain Equipment, Bake Shop Equipment, Candy and Ice Cream Makers' Equipment, Store Fixtures, Cigar Store Equipment, Front Office Equipment, Office Supplies, Kitchenette Equipment, Janitors' and Porters' Supplies, Paper Goods, and miscellaneous Hotel and Restaurant Specialties.

Furnishings, equipment and supplies which are intended for hotel and institution use must almost invariably be made expressly for that purpose. The products of the ordinary manufacturer seldom prove successful either from the standpoint of design or construction. Few manufacturers, in fact, actually have any adequate conception as to what the real

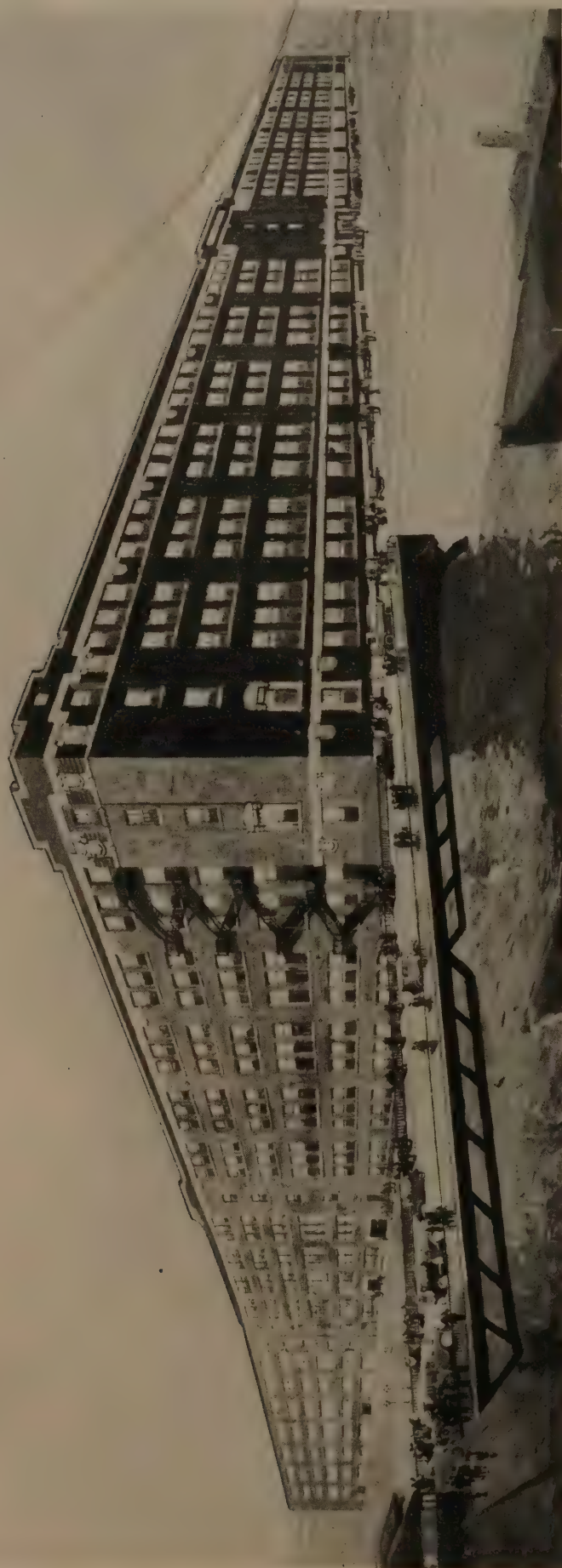
problems of hotel operation are.

Because the Pick-Barth Companies have had greater opportunity to study hotel operation and its effect upon the commodities used, it has been inevitable that we should be led to enter into manufacturing operations in numerous essential and specialized lines in order to be in a position to supply our customers with products of the right type. This we have done and today a very large proportion of the goods we sell is manufactured in plants we own or in which we have a substantial interest.

The most important factory division of the companies is The John Van Range Company, of Cincinnati, Ohio, which for generations has been known as a manufacturer of kitchen equipment of the very highest caliber. The recent affiliation of this company with the Pick-Barth organization has brought into one plant the largest volume of equipment manufacturing that has ever been enjoyed by any single concern.



Offices, Display Rooms and Operating Plant of the Eastern Division,—L. Barth & Company, Inc., Cooper Square, New York City



General Offices, Display Rooms, Warehouse, Factory and Operating Plant

Albert Pick & Company, 1200 West 35th Street, Chicago, Illinois

Western Division of the Albert Pick-Barth Companies

This great building is situated in the famous Central Manufacturing District of Chicago and contains over thirteen acres of floor space, with private docks, a large motor truck shipping section, and private switch tracks capable of handling sixteen freight cars at a single time. It is a model of merchandise warehousing, with miles of perfectly laid out stock bins and a multitude of devices for the speedy handling of

orders, including chutes, lowerators, moving belts, etc. The plant also contains various manufacturing divisions as well as specialized work-rooms devoted to linen sewing, drapery manufacturing and similar work and one of the largest carpet sewing departments in the country. Large display rooms form a permanent exhibit of thousands of items of hotel, restaurant and institution furnishings, equipment and supplies.



One of our big Carpet Sewing and Cutting Workrooms



Drapery Workroom, specially equipped for Hotel work

To handle this enormous production and to take advantage of the new opportunities it offered for the improvement of both manufacturing methods and of the products themselves, a tremendous new plant has been erected for the John Van Range Company at Cincinnati, and is now in full operation. This new factory is by far the largest of its kind in the world, having a capacity of several times that of any similar plant. It is in the heart of the famous Oakley industrial district of Cincinnati, and is located on a tract of land containing about 15 acres. The main building has a total floor area of approximately 260,000 square feet and consists of an immense single story steel-frame structure, adjoining which is a four story section of reinforced concrete in which the offices, display rooms and warehouse are located. At one end of the building



Linen Sewing Room, equipped with dozens of high speed power machines

are spur tracks and a truck loading section providing splendid shipping facilities.

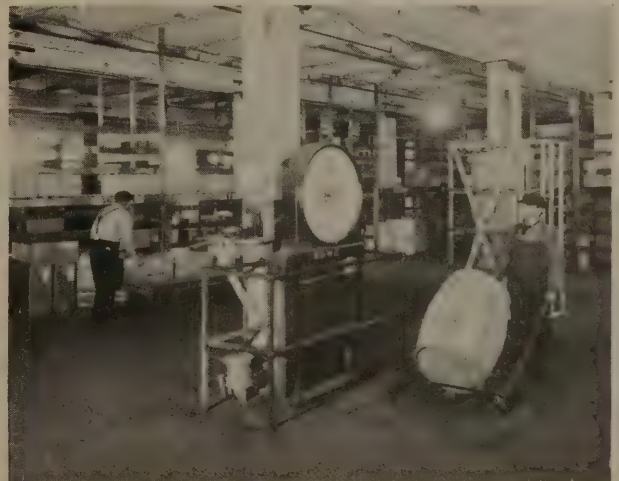
With the opening of this new plant, kitchen equipment manufacturing takes its place among the front rank of highly developed producing industries. Mass production methods, labor saving appliances, high power machinery, experimental laboratories and all the advanced instruments of the scientific

manufacturer are now for the first time brought to bear in full force and the results in both products and processes have immediately become evident.

Among the many important products made by The John Van Range Company are Ranges, Broilers, Urns, Steam Tables, Service Counters, Dish and Roll Heaters, Urn Stands, Sinks, Dish and Work Tables, Electric Cooking Appliances, Vegetable Steamers, Jacketed Kettles, Steam Roasters,



Model stock rooms like these cover acres of space

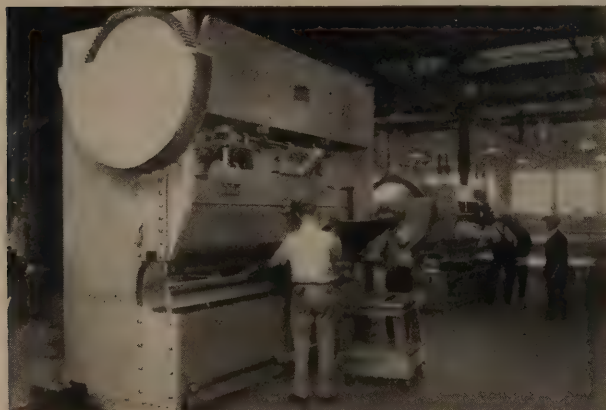


Perfect operating facilities speed the handling of orders

Views from the VAN Kitchen Equipment Factory



General view of the large sheet metal working department, where hundreds of feet of equipment are built at one time



Two of our huge power machines



View of our coppersmith shop



Electric arc-welding is widely employed



Another factory view, with machine shop in rear

Refrigerated Counters, Beverage and Ice Cream Coolers, Cafeteria Equipment, Lunch Room Equipment as well as a host of other kitchen devices.

A second great manufacturing unit of the Pick-Barth Companies is The Lorillard Refrigerator Company, of Kingston, N. Y. Like Van Equipment, Lorillard Refrigerators represent the highest standard of quality in their field, and many of the most prominent catering establishments in America are among their long list of installations. The Lorillard line includes every type of refrigerator used for public service establishments, ranging from the small stock boxes to giant cork and cement installations.

The Pick-Barth Companies are also manufacturers of Silverware—in fact they operate the only plant in the country devoted exclusively to Hotel quality wares. This factory, located in Bridgeport, Conn., has been in operation for over twenty-five years, and produces silver hollowware and flatware of a quality and durability that has no superior.

Among the numerous other products which our organization either manufacture, or on which we have patents or close factory affiliations are: Glassware, Chinaware, Kitchen Utensils, Store Fixtures, Furniture, Bedding, Concealed Beds, Kitchenette Equipment and Soda Fountain Equipment.

When the Pick-Barth Companies furnish a hotel or equip a kitchen, they are not acting simply as merchants, but as a trained service organization. Our corps of Hotel Specialists, Interior Decorators, Engineers and Technical Experts constitute a service staff which is in a position to handle the complete planning and installation of every item of furnishings, equipment and accessories necessary to trans-

form the bare structure into a hotel ready for operation.

Throughout our connection with the hotel project, and particularly in the early planning and promotional stages, the experienced counsel of our executives and staff of specialists is available in connection with matters such as leasing, operating, organization, financing, space requirements, allocation of departments, proportioning of facilities and the preparation of preliminary plan and budget data. In this capacity it has been our privilege to be of service to many of the country's leading hotel operators, architects, builders, promoters, real estate concerns and civic and financial institutions.

In undertaking the outfitting of a hotel, the planning of the furnishings is carried on by our staff of Contract Furnishing Specialists and Interior Decorators. We begin by a careful study of the architectural plans and an analysis of the type, size and location of the house, the patronage to which you will cater, the kind of facilities you wish to



Our Silverware Manufacturing Plant at Bridgeport, Conn. The only exclusive Hotel Silverware Factory in America



Factory of the Lorillard Refrigerator Company, Inc., Kingston, New York

offer, the character of competing hotels, the type of furnishings desired and all other factors upon which a successful outfitting scheme depends.

With this study as a foundation and with our experience in hundreds of hotels as a background, we then take up each division of the hotel in turn and make complete plans and budgets to take care of every necessary item. An interior decorating scheme is worked out to harmonize with and enhance the interior architectural treatment. Appropriate furniture and floor coverings are selected or created, draperies are designed, and lamps, paintings, antiques, objects of art are found where necessary to complete the scheme. We maintain our own designing and interior decoration studios exclusively for this work. In developing the plan, effects are not left to chance, but every detail of arrangement, color harmony, mass, height and grouping of furniture and their relation to the architecture and dimensions of the rooms are carefully worked out by means of furniture floor plans, sketches—and if for more elaborate projects, sometimes with perspective drawings of the principal public rooms.

At the same time, the layout and equipping of the food service departments are placed in the hands of our corps of kitchen engineers, who are recognized as the most experienced and authoritative staff in the country. Working in close co-operation with the architect and builder, these engineers prepare complete plans, layouts and specifications for the kitchens, lunchrooms, refrigerators, storerooms and all other food service departments, providing the necessary data to permit the proper provision for plumbing, wiring and steamfitting connections, and for structural work, lighting, sanitation, ventilating and other matters of this kind.

General supplies, such as chinaware, silverware, glassware, utensils, table and bed linens, together with innumerable accessories are carefully figured by technical experts in each department, so that the correct quantities, variety, sizes and qualities are accurately calculated in the light of long experience.

Often this involves the creation of special designs of crested patterns.

All this is then combined into one comprehensive plan and budget, which is presented to you in clear, easily understood form, supplemented by plans, sketches, samples, specifications and other information, affording perfect assurance that the costs involved are known and under control.

When the plan is approved, our operating organization—still under the guidance of the planning specialists and engineers, proceed with the execution of the contract. The furniture and floor coverings, frequently of special design, are produced by leading makers. The draperies and linens are sewed and made in our own workrooms. Kitchen equipment is manufactured in our own plants, as are silverware and many other commodities. And so with the other items, each being produced to order or from our large stocks, according to the specifications.

Finally, at the proper moment, systematically concerted shipments are made to the hotel building in the proper order and installation is made by trained crews under the supervision of experts. Carpets are laid, drapes are hung, furniture set in place, kitchen equipment installed and supplies are brought to the building, all fitting perfectly into the original plan, and when the hotel is turned over to you it is furnished and outfitted from cellar to roof, and ready for occupation.

This complete Hotel Furnishing Service is the unique development of the Albert Pick-Barth Companies. It is one which, in scope, character or experience is approached by no other concern in our line of business. The hotels illustrated in this book are but a few of the many hundreds we have furnished or equipped. They will, we believe, afford an indication of the value of our services and the quality of our products, and we are pleased to refer you to them for testimony as to our reliability, responsibility and competence.

Those who are interested in Hotels or similar projects are cordially invited to make full use of our planning and consultation staff. We make no charge for this service and it places you under no obligation. Communications should be addressed to the main offices in New York or Chicago.

The Albert Pick-Barth Companies

Albert Pick & Company—Western Division

Offices, Display Rooms and Operating Plant,—1200 West 35th Street, Chicago

Local City Display and Sales Rooms, 224 West Randolph Street, Chicago

Sales Offices or Representatives Located in Detroit, Cleveland, Atlanta, New Orleans, Dallas, Kansas City, Indianapolis, Milwaukee, Minneapolis, Salt Lake City, Seattle and Other Large Cities

L. Barth & Company, Inc.—Eastern Division

Offices, Display Rooms and Operating Plant,—Cooper Square, New York City

Sales Offices or Representatives Located in Philadelphia, Worcester, Mass., Baltimore, Washington, Syracuse, Harrisburg, Pa., Scranton, Pa., Atlantic City, N. J., Charlotte, N. C., Columbia, S. C., and Other Large Cities

The John Van Range Company—Manufacturing Division

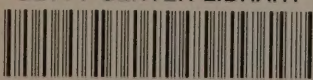
Factory, Offices, Sales and Display Rooms, Oakley, Cincinnati, Ohio

The Lorillard Refrigerator Company, Inc.—Manufacturing Division

Manufacturing Plant, Kingston, New York



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